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ABSTRACT

This document contains competency profiles for Ohio tech prep courses in the following 12 health technologies occupations: radiographer, respiratory care therapist, occupational therapy assistant, physical therapist assistant, registered nurse (associate degree), pharmacy technologist, medical laboratory technician, histotechnologist, emergency medical technician, dental hygienist, dental laboratory technician, and health information technician. The guide contains seven sections: (1) systemic curriculum reform philosophy--Ohio's vision of tech prep, the Ohio Tech Prep Path, and six critical components that guide Ohio's tech prep consortia; (2) the TCP (Tech-Prep Competency Profiles) process--the philosophy behind the development of TCPs and the process that yielded this guide; (3) TCP Partners from Industry--a listing of the business, industry, and labor representatives who participated in the development of TCPs within health technologies; (4) TCP Partners from Education--a listing of the secondary and postsecondary educators who participated in the development of TCPs within health technologies; (5) a sample TCP--an actual health technologies TCP from one of Ohio's tech prep consortia; (6) TCP Matrix--definitions for each of the 12 technical occupations within the health technologies cluster and a matrix for use in compiling draft competency lists to develop a Tech-Prep Competency Profile that fits the labor market needs of any consortium; and (7) Essential Competencies--the units that appear in each of the individual occupations as well as in various cluster combinations. The remaining sections of the guide contain both core and specialized units for each of the 12 specific occupations within the health technologies cluster. Contains a 61-item partial health technologies bibliography. (KC)

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TECH PREP

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The State of Ohio presents . . .

Tech-Prep Competency Profiles

within the

Health Technologies Cluster

Radiographer
Respiratory Care Therapist
Occupational Therapy Assistant
Physical Therapist Assistant
Registered Nurse (Associate Degree)
Pharmacy Technologist
Medical Laboratory Technician
Histotechnologist
Emergency Medical Technician
Dental Hygienist
Dental Laboratory Technician
Health Information Technician

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Each of the following sections of the binder contain both core and specialized units for a specific occupation within Health Technologies.

Radiographer
Respiratory Care Therapist
Occupational Therapy Assistant
Physical Therapist Assistant
Registered Nurse (Associate Degree)
Pharmacy Technologist
Medical Laboratory Technician
Histotechnologist
Emergency Medical Technician
Dental Hygienist
Dental Laboratory Technician
Health Information Technician

As you use these twelve sections and the TCP Matrix, please note the following :

All the units listed in these sections will not necessarily apply to your situation, nor will all the competencies within each unit be appropriate. For example, some units will not appear in a final TCP, others will, and still others will only appear in partial form. Likewise, some competencies and/or competency builders will either be (1) added, (2) deleted, or (3) altered in wording in a final TCP. In some cases the number of units listed far exceeds the amount of content that can be covered.

Also, note that several units appear within each specific occupation and should only be listed once if you are compiling a cluster of occupations (e.g., Radiographer, Medical Laboratory Technician, and Physical Therapist Assistant as a Health Technologies Cluster). Always review each list of units against the TCP Matrix and your labor market demands before attempting verification (TCP Part I), leveling (TCP Part II), and teambuilding (TCP Part III).

How to Use the TCP Binder

This binder is divided into the following sections:

Systemic Curriculum Reform Philosophy shares Ohio's vision of Tech Prep, the Ohio Tech Prep Path, and six critical components which guide Ohio's Tech Prep consortia.

The TCP Process explains the philosophy behind the development of Tech-Prep Competency Profiles (TCPs) and details the process that yielded this composite binder on Health Technologies.

TCP Partners from Industry is a listing of the business, industry, and labor representatives who participated in the development of TCPs within Health Technologies.

TCP Partners from Education is a listing of the secondary and postsecondary educators who participated in the development of TCPs within Health Technologies.

A Sample TCP—This section contains an actual Health Technologies TCP from one of Ohio's Tech Prep consortia.

TCP Matrix—This section provides definitions for each of the twelve technical occupations within this Health Technologies Cluster and an actual matrix for your use in compiling draft competency lists to develop a Tech-Prep Competency Profile that fits the labor market needs of your consortium.

Essential Competencies outlines the units that appear in each of the individual occupations as well as in various cluster combinations. These competencies may vary slightly due to program emphasis, yet they should be viewed as essential to success within Health Technologies.

—continued on the reverse—

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OHIO'S VISION

Tech Prep in Ohio *is defined as a competency-based program of combined secondary and postsecondary education and occupational experience that includes a common core of required proficiency in mathematics, science, communication, and technologies designed to lead to an associate degree or two-year postsecondary certificate in specific career fields.* Our goal is to produce a highly educated and qualified workforce that is reponsive to the needs of business, industry, and labor.

Through Ohio's statewide network of consortia, Tech Prep promotes effective linkages among secondary and postsecondary schools and colleges. Each consortium is comprised of (a) at least one public community college, public technical college or branch campus offering technical education associate degree programs, (b) one or more vocational education planning districts (VEPDs), and (c) business, industry, and labor partners. Associate schools within each VEPD, co-located regional campuses, four-year universities, Job Training Partnership Act (JTPA) Service Delivery Areas (SDAs), and Ohio's Thomas Edison programs are encouraged to be active members of the consortium.

Starting with the student's Individual Career Plan (ICP) in grade 9, Tech Prep programs arrange the study of mathematics, science, communications, technology, and specific technical skills in a **step-by-step progression of coordinated curricula**. The goal of Ohio's Tech Prep program is to produce students who possess the advanced skills necessary to enter technical occupations by the end of a two-year postsecondary degree, school-to-work, or an apprenticeship program. This is to be achieved through an unduplicated program of study that is responsive to the changing technical needs of business, industry, and labor.

Tech Prep programs do not focus on linking what Ohio is currently doing at the secondary level with what is currently being offered at the postsecondary level, but rather **focus on achieving systemic change at both levels**. In order to achieve this ambitious outcome, Ohio's Tech Prep programs require academic, occupational, and employability competency attainment at both the secondary and postsecondary levels.

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OHIO'S VISION

AT THE SECONDARY LEVEL:

- **Academic competency** requirements must be defined at the end of grade 12 and obtained through college-prep courses or applied academic courses.
- **Occupational competency** requirements and employment options must be defined at the end of the 12th grade. Occupational competencies at the secondary level may be obtained through vocational education, technical education (using postsecondary options), school-to-work, or an apprenticeship program.
- **Employability competency** requirements must be defined at the end of grade 12.

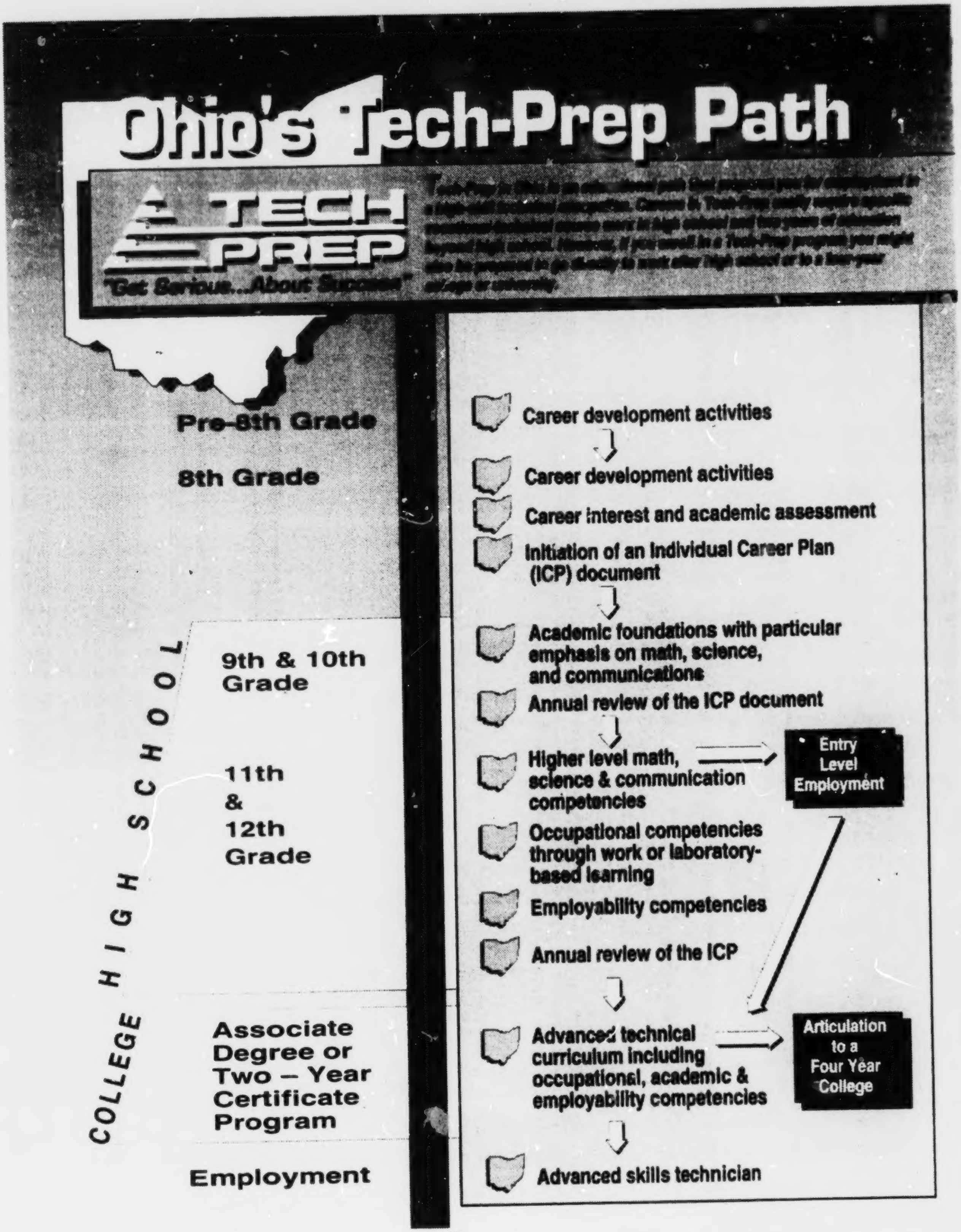
AT THE POSTSECONDARY LEVEL:

- **Academic competency** requirements must be defined at the end of the postsecondary degree, school-to-work, or apprenticeship program.
- **Occupational competency** requirements must be defined by the end of the postsecondary degree, school-to-work, or an apprenticeship program. Occupational competencies at the postsecondary level may be obtained through technical education (using postsecondary options), school-to-work, or an apprenticeship program.
- **Employability competency** requirements must be defined at the end of the postsecondary degree, school-to-work program, or apprenticeship program.

"GET SERIOUS ABOUT SUCCESS"

Tech Prep in Ohio is an educational path that prepares students for employment in a technical occupation. Tech Prep prepares students for careers requiring specific occupational course work in high school and a two-year college technical degree or two-year postsecondary certificate program. In addition, Tech Prep students have the option to go directly to work after high school or to a four-year college or university.

Ohio's Tech-Prep Path



[illegible] Tech-Prep [illegible] beyond high school. However, if you enroll in a Tech-Prep program you might also be prepared to go directly to work after high school or to a four-year college or university.

Pre-8th Grade

- Career development activities

8th Grade

- Career development activities
- Career interest and academic assessment
- Initiation of an Individual Career Plan (ICP) document

HIGH SCHOOL

9th & 10th Grade

- Academic foundations with particular emphasis on math, science, and communications
- Annual review of the ICP document

11th & 12th Grade

- Higher level math, science & communication competencies → Entry Level Employment
- Occupational competencies through work or laboratory-based learning
- Employability competencies
- Annual review of the ICP

COLLEGE

Associate Degree or Two – Year Certificate Program

- Advanced technical curriculum including occupational, academic & employability competencies → Articulation to a Four Year College

Employment

- Advanced skills technician

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OHIO'S CRITICAL COMPONENTS

I. SYSTEMIC CHANGE

Tech Prep programs will demonstrate systemic change. New, creative, and innovative options will be provided to students. These options will not focus on linking what Ohio is currently doing at the secondary level with what is currently being offered at the postsecondary level, but rather focus on achieving systemic change at both levels.

II. EXPANDED STUDENT OPPORTUNITY

Tech Prep programs will provide expanded opportunities for all students.

III. PARTNERSHIPS

Tech Prep programs are a partnership between secondary education, postsecondary education, and business, industry, and labor.

IV. EARLY INDIVIDUAL CAREER EDUCATION

Early career education and career exploration are essential to Tech Prep programs. Starting with the student's Individual Career Plan (ICP) in grade 9, Tech Prep programs arrange the study of mathematics, science, communication, technology, and specific technical skills in a step-by-step progression of coordinated curricula.

V. COMPETENCIES

Academic, occupational, and employability competencies are required at both the secondary and postsecondary levels, enabling a student to enter employment at both the completion of the 12th grade and the end of the postsecondary program.

VI. ADVANCED SKILLS

Tech Prep curriculum must prepare students with the advanced skills necessary for technical occupations by the end of a two-year postsecondary degree, school-to-work, or an apprenticeship program through an unduplicated program of study that is responsive to the changing technical needs of business, industry, and labor.

Tech-Prep Competency Profiles (TCPs)

Federal Guidelines

As the 21st century approaches our need to achieve systemic educational change is paramount. In direct response to Goal 5 of the National Education Goals, Section 347 of PL. 101-392 states: the term "tech-prep education program" means a combined secondary and postsecondary program which (1) leads to an associate degree or 2-year certificate; (2) provides technical preparation in at least one field of engineering technology, applied science, mechanical, industrial, or practical art or trade, or agriculture, health, or business; (3) builds student competence in mathematics, science, and communications (including through applied academics) through a sequential course of study; and (4) leads to placement in employment. Tech Prep is an effective way for educators to join forces with business, industry, and labor to offer expanded opportunities to the future work force.

Systemic Curriculum Reform

In Ohio, Tech Prep is a reconceptualization of curriculum designed to train a more flexible, knowledgeable, and technically adept workforce. We are (1) setting standards that will equip students with the knowledge and skills needed for employment and the lifelong learning skills needed to retrain as job market requirements change; (2) improving the match between what work requires and what students are taught; (3) addressing the curricular needs of differences among students; and (4) providing continuity in learning by teaching in context. Yet, the primary obstacle of systemic curriculum reform is individuals who fear change.

The TCP "Process"

Therefore, Ohio is using a **process** which allows individuals from both secondary and postsecondary education and business, industry, and labor to deal with change in a positive manner by being active decision makers in the development of Tech Prep curriculum. The Tech-Prep Competency Profile (TCP) Process produces a list of occupational, academic, and employability competencies that need to be obtained during grades 9-12 and the first two years of postsecondary training—leading to an associate degree or two-year postsecondary certificate—in preparation for technician level positions in business, industry, and labor. Each step of the process is described on the following pages.

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Prior to Part I of the TCP Process...

—Labor market survey data is collected and analyzed to determine the need for "technicians" within the consortium.

—Once that individual occupation or cluster of occupations has been identified, definitions are prepared and approved by the governing body of the consortium. A sample definition follows:

Medical Laboratory Technician—An individual who performs general medical laboratory procedures and routines under the supervision of a physician or laboratory director. Technical skills should include, but not be limited to:

- laboratory instrument operation and maintenance
- principles of bacteriological, biological, and chemical test procedures
- medical laboratory safety procedures
- performing medical laboratory tests, procedures, experiments, and analyses
- chemical analyses of body fluids
- analyzing test results and enters findings in computer
- infection control methods

—The definitions are then used to identify the units needed to compile a draft list of competencies for use in Part I of the TCP Process. Note: The original draft TCPs for each occupational cluster were derived from an international literature review of items that were (1) not listed in the bibliographies of Ohio's 1990-1992 Competency Analysis Profiles (national literature review used); (2) postsecondary academic and technical course outlines and DACUM charts; and (3) curriculum items entered into ERIC between 1990-95. Then, as TCPs were conducted across Ohio during 1993-95, each consortium's specific labor market needs broadened the databank of possible competencies. As each TCP was completed, the final competency list was entered into a composite file, creating a set of core units (with a high rate of appearance on TCPs) and a set of specialty units (appearing only on certain TCPs due to specific labor market demands). This compiling mechanism resulted in a composite TCP Binder for each technology cluster.

—Partial Health Technologies Bibliography—

Every item used to develop specific TCPs (e.g., individual college course outlines) is not included.

"2 + 2" articulated curriculum for health occupations. A basic course outline. grade 11 nursing. (1990). Paris, Texas: Paris Junior College.

"2 + 2" articulated curriculum for health occupations. A basic course outline. grade 12 nursing. (1990). Paris, Texas: Paris Junior College.

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—Partial Health Technologies Bibliography (cont.)—

Every item used to develop specific TCPs (e.g., individual college course outlines) is not included.

"2 + 2" articulated curriculum for health occupations: a how-to-manual. (1990). Paris, Texas: Paris Junior College.

"2 + 2" articulated health occupations project. Nursing program. Second year final report. (June 1990). Paris, Texas: Paris Independent School District.

Allied health occupations II. Dental assistant component. Student learning guide. Middletown Public Schools curriculum standards. (1984). Middletown, Connecticut: Middletown Public Schools.

Articulation matrix for home health aide, nursing assistant, patient care assistant, practical nursing. (April 1989). Tallahassee: Florida State University, Center for Instructional Development and Services.

Associate degree nursing competency profile. (1990). Orangeburg, South Carolina: Orangeburg-Calhoun Technical College.

Baker, S. (Fall 1986). *Journal of health occupations education*, "History of licensure in several occupations in the health professions." Vol. 1, no. 2.

Biglow, L. A. (December 1981). *A curriculum guide to medical record education.* Chicago, Illinois: American Medical Records Association.

Campbell, L., et. al. *Nursing: Complex needs I. Complex needs II. Entry into professional practice. A basic course outline (college sophomores) for nursing. A four-year "2 + 2" articulated curriculum for the occupation of nursing.* (1990). Paris, Texas: Paris Junior College.

Connell, S., Elliott, R.T., and Benson, R.T. *V-TECS guide for health care assistant.* (1991). Decatur, Georgia: Vocational-Technical Education Consortium of States.

Dental hygiene. Florida vocational program guide. (July 1989). Tallahassee: Florida State University, Center for Instructional Development and Services.

Dental radiology 1 student guide and instructor guide. (1989). Appleton, Wisconsin: Fox Valley Technical College.

Eling, D. R. (February 6, 1985). *Dental assistant specialist.* (AFSC 98150). Gunter AFS: Air University, Alabama Extension Course Institute.

Entry-level associate degree nursing competency profile. (1987). Rock Hill, South Carolina: York Technical College.

Entry level competencies for accredited record technicians. (January 1992). American Health Information Management Association.

Entry-level competencies for the medical assistant. (1991). Chicago, Illinois: American Association of Medical Assistants' Endowment.

Essentials and guidelines for an accredited educational program for the occupational therapy assistant. (1991). Rockville, Maryland: The American Occupational Therapy Association, Inc.

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—Partial Health Technologies Bibliography (cont.)—

Every item used to develop specific TCPs (e.g., individual college course outlines) is not included.

Evaluation criteria for accreditation of education programs for the preparation of physical therapists. (1992). Alexandria, Virginia: Commission on Accreditation in Physical Therapy Education. American Physical Therapy Association.

Evaluation outcomes of associate degree nursing programs: roles and competencies. (1990). New York: National League for Nursing.

Garollo, J. (October 1987). *A curriculum guide for medical record technologist*. Harrisburg, Pennsylvania: Harrisburg Area Community College.

Guide for training medical laboratory technicians. Fourth edition. (1989). Park Ridge, Illinois: American Medical Technologists.

Health care technical advisory committee on curriculum development. Job clusters, competencies and task analysis. (December 1988). Havre, Montana: Northern Montana College, Montana Center for Vocational Education, Research, Curriculum and Personnel Development.

Health care technician core competencies. Draft copy. (1990). Richmond: Virginia Department of Education, Vocational and Adult Education.

Health occupations education. Vocational education program course standards. (1992). Tallahassee: Florida State Department of Education, Division of Vocational, Adult, and Community Education.

Histologic technician. Laboratory occupations cluster. (1985). East Lansing: Michigan State University, College of Agriculture and Natural Resources Education Institute.

Hronek, D. *Radiology aide. Instructor's guide*. (January 1987). Columbia: University of Missouri-Columbia, Instructional Materials Laboratory.

Hudis, P. M. (April 1992). *Meeting the personnel needs of the health care industry through vocational education programs*. Berkeley, California: National Center for Research in Vocational Education.

Lathrop, J., (1988). *Health Occupations. Education for Employment Task Lists*. Springfield: Illinois State Board of Education, Department of Adult Vocational and Technical Education.

Lathrop, J., *Cluster matrices for health occupations*. Springfield: Illinois State Board of Education, Department of Adult Vocational and Technical Education.

Maddox, G. et. al. *Nursing process: Basic needs 1. Basic needs 11. Nursing through the life span. Entry into professional nursing. A basic course outline (college freshmen) for nursing. A four-year "2 + 2" articulated curriculum for the occupation of nursing*. (1990). Paris, Texas: Paris Junior College.

Medical office procedures: tasks analyses. Competency-based education. (1984). Glen Allen, Virginia.

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—Partial Health Technologies Bibliography (cont.)—

Every item used to develop specific TCPs (e.g., individual college course outlines) is not included.

Medical transcriptionist. (1990). Charleston: West Virginia Board of Education, Bureau of Vocational, Technical and Adult Education.

Meeting needs in nursing—curriculum development. Project report. (1989). Eau Claire, Wisconsin: Chippewa Valley Technical College.

Model competency-based language arts program. (1992). Columbus: Ohio Department of Education, Division of Curriculum, Instruction, and Professional Development.

Model competency-based mathematics program. (1991). Columbus: Ohio Department of Education, Division of Elementary and Secondary Education.

Model competency-based science program. (1994). Columbus: Ohio Department of Education, Division of Professional Development.

National accrediting agency for clinical laboratory sciences phlebotomy programs approval guide. (1991). Chicago, Illinois: National Accrediting Agency for Clinical Laboratory Sciences.

Neighbors, M., Eldred, E., & Sullivan, M. (February 1991). *Nursing & health care*, "Nursing skills necessary for competency in the high-tech health care system." Vol. 12, no. 2.

Occupational analysis occupational therapy assistant. (1986). Cincinnati, Ohio: Cincinnati Technical College.

Ohio competency analysis profile. Dental Assistant. (August 1991). Columbus: Ohio Department of Education, Division of Vocational and Career Education, and The Ohio State University, Center on Education and Training for Employment, Vocational Instructional Materials Laboratory.

Ohio competency analysis profile. Diversified health occupations. (February 1992). Columbus: Ohio Department of Education, Division of Vocational and Career Education, and The Ohio State University, Center on Education and Training for Employment, Vocational Instructional Materials Laboratory.

Ohio competency analysis profile. Medical assistant. (1991). Columbus: Ohio Department of Education, Division of Vocational and Career Education, and The Ohio State University, Center on Education and Training for Employment, Vocational Instructional Materials Laboratory.

Ohio competency analysis profile. Practical nursing. (1992). Columbus: Ohio Department of Education, Division of Vocational and Career Education, and The Ohio State University, Center on Education and Training for Employment, Vocational Instructional Materials Laboratory.

Possible occupational outcomes of health careers tech prep programs. (January 1992). Springfield: Illinois Occupational Information Coordinating Committee.

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—Partial Health Technologies Bibliography (cont.)—

Every item used to develop specific TCPs (e.g., individual college course outlines) is not included.

Preparing Michigan students for the jobs of tomorrow, the report of the tech prep task force. (1988). Lansing: Michigan State Board of Education.

Prewitt, M.W. (January 1987). *Respiratory therapy aide. Instructor's guide.* Columbia: University of Missouri-Columbia, Instructional Materials Laboratory.

Registered nurse. Terminal performance objectives. (1989) Baltimore, Maryland: Dundalk Community College.

Reneau, F., Hahn, D. (1989). *Catalog of performance objectives and performance guides for physical therapy occupations.* Springfield: Illinois State Board of Education, Department of Adult Vocational and Technical Education.

Reneau, F., Hahn, D., Matthews, J. *Catalog of performance objectives and performance guides for occupational therapy occupations.* (1989). Springfield: Illinois State Board of Education, Department of Adult Vocational and Technical Education.

Reneau, F., Hahn, D., & Matthews, J. *Curriculum guide for radiologic technology occupations.* (1988). Springfield: Illinois State Board of Education, Department of Adult Vocational and Technical Education.

Report to congress on the study of the role of allied health personnel in health care delivery. (June 1988). Rockville, Maryland: Health Resources and Services Administration, Bureau of Health Professions.

Rich, J. H. (1990). *Reference guide for teaching selected duty areas from business, marketing and management occupations.* Springfield: Illinois State Board of Education.

Robertson, B. & Stevenson, N. (June 1990). *Nursing. A basic course outline for health careers I (grade 11). A four year "2+2" articulated curriculum for the occupation of nursing.* Paris, Texas: Paris Independent School District, Paris Junior College.

Sapp, H. & Squires, S. (1989). *Emergency medical services. Project report phase I with research findings.* Athens: University of Georgia, Division of Vocational Education.

Saxe, E., et. al. (September 1990). *Curriculum development for part-time programs for certified nurse assistant to licensed vocational nurse; and licensed vocational nurse to associate degree nurse program (CNA-VN-RN).* Imperial Valley, California: Imperial Valley College.

Task analysis for health occupations, cluster: nursing. (1988). Springfield: Illinois State Board of Education, Department of Adult Vocational and Technical Education.

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Every item used to develop specific TCPs (e.g., individual college course outlines) is not included.

Task listing for respiratory therapy assistant. (1985). Richmond: Virginia Department of Education, Division of Vocational and Adult Education.

Technical committee report for practical nursing. (1992). Idaho State Board for Vocational Education.

Technical committee report for health occupations for secondary schools. Year one. (1992). Boise: Idaho State Board for Vocational Education.

Zilbert, E. E., & Mercer, J. W. (1992). *Technology competence: learner goals for all Minnesotans.* St. Paul: Minnesota State Council on Vocational-Technical Education.

Part I of the TCP Process...

Business, industry, and labor representatives from a consortium's labor market area are convened (8-14 hours) to identify the occupational, academic, and employability competenices needed by one or more technician-level positions.

—First, a brainstorming session is conducted to identify the critical skills needed by the technician(s) positions being targeted (e.g., Radiographer, or a cluster of occupations within Health Technologies).

—Second, a draft competency list that has been compiled in accordance with definitions of the individual or group of technician-level position(s) identified as the Tech-Prep consortium's labor market need is offered for consideration. The business, industry, and labor representatives eagerly (1) add to, (2) delete from, and (3) alter the wording of the draft competency list until it reflects the needs in the consortium's labor market area. It is critical that business, industry, and labor representatives alter the draft to fit the needs of their area, because it will be the catalyst for systemic curriculum reform in their schools and colleges—ultimately altering the type of employee pool available.

—Finally, the business, industry, and labor representatives are provided with copies of Ohio's Language Arts (Communications), Mathematics, and Science Curriculum Models. They are asked to circle the code beside each competency they think is appropriate to be taught in the context of the technologies being adddressed by the TCP. This is done by silent, written votes so that the educational levels of committee members will not sway the results. After aggregating their responses, the corresponding competencies are marked with an asterisk (*) and used for discussion during Parts II and III of the TCP Process.

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Part II of the TCP Process...

Both the academic and vocational-technical faculty members who will be delivering the competencies in the consortium's participating secondary schools and postsecondary colleges meet (6 hours) to assign grade levels and mastery levels to each competency on the list.

—Codes are used to indicate two-year increments (10, 12, AD) during which the competencies will be introduced (I) and/or reinforced (R); when students will be deemed competent (C), proficient (P), or master (M) the competency; whether the competency will be taught at a worksite (WS); or is a lifelong learning (LL) skill due to technological change. Most competencies carry multiple codes such as I-10, M-12, R-AD, WS, LL or I-12, M-AD, WS.
—Faculty members are also asked to identify obstacles that would inhibit delivering the competencies as stated (e.g., wording, equipment, inservice needs). These issues are recorded and discussed during TCP Part III.
—Faculty members are also given the list of academic competencies that business, industry, and labor representatives identified during Part I as appropriate to be taught in the context of those technologies (indicated by an asterisk*) and asked to verify the validity of those choices. They are also asked to identify (using #) any additional competencies that need to be taught in the context of those technologies Note—this is necessary due to educational terms being uninterperable by industry representatives. In this way faculty will discuss ways to apply academic content to the various technologies and ways to collaborate across disciplines.

Faculty would examine the following mathematics sample during TCP Part II.

Unit: Mathematics Literacy *** = Industry identified these to be taught using applied methods** **# = Teachers identified these to also be taught using applied methods** **Note: The remaining competencies are to be taught using regular or applied methods.**	10	12	AD	WS	LL
Subunit: Data Analysis and Probability					
Create and interpret discrete probability distributions*					
Understand concept of random variable# (the list would continue...)					

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Part III of the TCP Process...

Both groups, from TCP Parts I and II, meet together (4 hours) to address perceived obstacles to accomplishing the competencies and how they, as a team, can best work together to facilitate delivery of the curriculum by removing or addressing each of the obstacles identified in Parts II and III. This is the "magic" of the TCP Process. With all the individual "players" at the same table, planning for true systemic change can take place—especially if the focus is improving the education and training of students who will be their future employees and community members.

Post TCP Part III

Following Part III of the TCP Process, the Tech Prep consortium develops their systemic reform curriculum pathway(s). An important step in developing those curriculum pathways is the leveling of all the competency builders. When completed the TCP Accountablility Chart might look like the following example:

Sample Section of a TCP Accountabilty Chart

Unit: Computer Literacy	10	12	AD	WS	LL
Competency: Explain information processing cycle	I	M			
Competency Builders: Define operating systems (e.g., DOS, OS/2, UNIX)	M	R			
Differentiate between data files and program files	I	M			
Explain PC network layout		M			
Differentiate hardware from software	M	R			
Competency: Operate computer hardware	I	R	M	√	√
Competency Builders: Practice proper media handling techniques (e.g., magnetic fields, dust, liquids)	I	M	R	√	√
Identify hardware and its use	I	M	R	√	√
Use hardware (e.g., mouse, drives, modems, cables, printers, digitizers, scanners, protection devices)	I	R	M	√	√
Keyboard efficiently		M	R	√	
Demonstrate basic care of hardware	I	M	R	√	
Explain need for an application of security levels		R	M	√	

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The TCP Accountability Chart is then used to extrapolate competenices into Competency Documentation Sheets which verify that all the competencies in the TCP are within the set of courses identified on the Curriculum Pathway (See pp 7-8).

Partial Sample of a Competency Documentation Sheet

Flagship Tech Prep Consortium, Futures High School
Health Technologies Program

Integrated Math I covers the following competencies:

Estimate and use measurements
Establish ratios with and without common units
Identify area and volume
Organize data into tables, charts, and graphs
Read, interpret, and use tables, charts, and graphs to identify patterns, note trends, draw conclusions, and make predictions
Construct maps, tables, charts, and graphs as they relate to real-world mathematics
Identify slope, midpoint, and distance
Set up, solve, and graph linear equations
Simplify algebraic expressions
Represent problem situations with geometric models and apply properties of figures, angles, parallel, and perpindicular lines
Identify congruent and similar figures
Graph linear functions
Analyze and describe errors and error sources that can be made when using comptuers and calculators to solve problems
Interpret drawings of three-dimensional objects
Solve rate-change problems
Apply measures of central tendency, variability, and correlation
Describe problem situations by using and relating numerical, symbolic, and graphical representations
Describe normal curve in general terms and use its properties
Translate verbal statements into symbolic language
Apply different types of measurement scales
Decide whether problem situation is best solved using computer, calculator, paper and pencil, or mental arithmetic/estimation techniques

(the list would continue...)

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SCHOOL NAME
Futures County High School

SCHOOL YEAR
1994-95

TECH PREP PROGRAM
Allied Health Technologies

FLAGSHIP TECH-PREP CONSORTIUM

SAMPLE SECONDARY PATHWAY
(cluster program)

9th Grade	Min	10th Grade	Min	11th Grade	Min	12th Grade	Min
English 9	47	English 10	47	English 11	47	English 12	47
Pre-Algebra or Algebra	47	Algebra I or Geometry	47	Geometry or Algebra II	47	Algebra II or Trig	47
Physical Science	47	Biology	47	Anatomy & Physiology	47	Chemistry or Physics	47
Social Studies	47	Social Studies	47	Am. History	47	Government/Civics	47
Physical Ed./Health	47	Computer Basics	47	**Health Technology***	47	**Health Technology***	47
Elective	47	Elective	47	**Health Technology***	47	**HT Internship****	47
Elective	47	Elective	47	**Health Technology***	47	**HT Internship****	47

Criteria for Grade 11 of Tech Prep:
Passing tne 9th Grade Proficiency Test
Passing Algebra I or Equivalent

Criteria for college part of Tech Prep:
20 observation hours for OT and min. 2.5 GPA;
40 observation hours for PT and min. 2.5 GPA

Suggested Electives:
Sociology;
Psychology;
Child Development

*Explanation of Tech Prep Course/Block:
15 students are in a 141 minute block of core
curriculum in 11th grade and 94 minutes of
core in 12th grade with intern hours in specialties

High School Exit Occupations—
Records Clerk, Nurse Aide

—College Exit Occupations
Physical Therapist Assistant;
Occupational Therapy Assistant; Associate Degree Nurse

COLLEGE NAME
Flagship Community College

SCHOOL YEAR
1995-96

TECH PREP PROGRAM
Physical Therapist Assistant

FLAGSHIP TECH-PREP CONSORTIUM

1st Semester	Cr.	2nd Semester	Cr.	3rd Semester	Cr.	4th Semester	Cr.
College Algebra*	3	Nutrition 110	3	Physical Therapy 211	3	Physics 201	3
Computers 101*	2	Human Development	3	Technical Elective	3	Physical Therapy 255	4
Biology 201	3	**Anatomy & Phys. 121***	3	Special Diets	2	PT Clinical	6
Psychology 101	3	Speech	2	Abnormal Psych. 267	3	PT Clinical	4
General Elective	3	Physical Therapy 101	3	PT Clinical	4	**Rec. Therapy 235**	**2**
Communications 111	3	Technical Writing	3	PT Clinical	4	**Kinesiology 270**	**3**
						Biochemistry 289	**3**

Criteria for college part of Tech Prep:	**Advanced Skills portion of Tech Prep:**
40 observation hours and min. 2.5 GPA;	Shaded classes would be added as capstones
application on file	if students test out of starred (*) courses

Suggested Electives:	**Explanation of Tech Prep Course Differences:**
Physical Education;	Deletion of lower level courses due to high school
Swimming;	portion of Tech Prep would result in 2-8 hrs.
Adv. Biology 233	of capstone credits = advanced skills

SAMPLE POSTSECONDARY PATHWAY
(one program area)

High School Exit Occupations—
Records Clerk, Nurse Aide

—College Exit Occupation
Physical Therapist Assistant

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American Ambulance Service, Youngstown

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Am Care, Youngstown

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Oza & Oza, MD's, Dayton

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Homedico of Ohio, Mansfield

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Samaritan Medical Center, Ashland

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Revco, Mansfield

Jim Kelley, Physical Therapist
Mercy Hospital, Willard

Janet Knott, Pharmacy Technician
Revco, Marion

Becky Myers, Pharmacy Technician
Wal Mart, Mansfield

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Beachwood

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Competency Index

This index allows you to scan the competencies under each unit title. Please note the academic units (i.e., Communications, Mathematics, Science, and Technology Literacy) are not listed due to their being specific to the State of Ohio.

Unit: Employability Skills

Competencies:
Develop a career plan
Prepare for employment
Evaluate the importance of self-esteem as an employability skill
Demonstrate job retention skills
Demonstrate knowledge of work ethic
Exhibit appropriate work ethic
Apply decision-making techniques
Apply problem-solving techniques
Exhibit characteristics for job advancement

Unit: Professionalism

Competencies:
Project professional image
Achieve individual and professional goals
Manage personal finances
Support community well-being
Achieve organizational goals
Demonstrate positive relations in the workplace
Manage stressful situations
Analyze effects of family on work and work on family
Apply lifelong learning skills
Manage professional development

Unit: Teamwork

Competencies:
Demonstrate knowledge of teamwork
Demonstrate teamwork
Use teamwork to solve problems
Conduct team meetings

Unit: Computer Literacy

Competencies:
Describe personal computer operations
Operate computer hardware
Use software

Unit: Documentation

Competencies:
Demonstrate proficiency in technical documentation
Demonstrate proficiency in technical report writing

Unit: Infection Control and Risk Management

Competencies:
Comply with local, state, and federal regulations
Comply with environmental safety standards,accident prevention methods, and disaster plans
Maintain personal safety and hygiene
Maintain infection control of work area
Apply aseptic and sterilizing principles
Dispose of waste materials in compliance with government regulations
Demonstrate isolation techniques
Maintain patient safety
Explain sexually transmitted diseases (STDs)
Practice quality control
Conduct proficiency testing

Unit: Medical Terminology

Competencies:
Use common medical symbols, abbreviations, and acronyms
Demonstrate knowledge of medical terminology

Unit: Anatomy, Physiology, and Pathology

Competencies:
Demonstrate general knowledge of basic chemistry
Demonstrate general knowledge of the human body
Demonstrate knowledge of the integumentary system
Demonstrate knowledge of the skeletal system
Demonstrate knowledge of the muscular system
Demonstrate knowledge of the nervous system
Demonstrate knowledge of the circulatory/cardiovascular system
Demonstrate knowledge of the lymphatic system
Demonstrate knowledge of the respiratory system
Demonstrate knowledge of the digestive system
Demonstrate knowledge of the endocrine system
Demonstrate knowledge of the urinary system
Demonstrate knowledge of the reproductive system
Demonstrate knowledge of the senses
Demonstrate knowledge of immunology

Unit: Medical Law and Ethics

Competencies:
Comply with medical law and ethics
Exhibit ethical behavior
Describe legal ramifications of misconduct
Practice discretion regarding patient information
Practice personal professional protocol with medical community

Unit: Psychology of Stress

Competencies:
Analyze factors that influence a patient's response to stress
Analyze physiological response to stress
Analyze psychological response to stress
Provide care for a patient with an ineffective coping response

Unit: Psychology of Human Relations

Competencies:
Explain human growth and development
Demonstrate appropriate communication techniques
Establish rapport
Follow established procedures for communication and documentation
Document patient progress

Unit: First Aid and Medical Emergencies

Competencies:
Use emergency procedures
Perform first aid
Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards
Respond to medical emergencies

Unit: General Administrative Duties

Competencies:

Perform scheduling and recordkeeping duties
Perform other departmental duties
Manage reception area
Demonstrate telephone handling techniques
Maintain appointment schedules
Maintain medical records and laboratory reports
Prepare office communications
Use office equipment
Demonstrate knowledge of different payment systems
Perform diagnostic coding
Process insurance claims/forms
Perform financial functions

Unit: Vital Signs

Competencies:

Interview patient
Measure temperature
Measure pulse
Measure respiration
Measure blood pressure
Obtain physical measurements

Unit: Nutrition

Competencies:

Identify fundamentals of nutrition
Identify nutritional needs related to special conditions and/or diseases
Draw correlation between diet and exercise
Identify facets of alternative nutrition

Unit: Basic Pharmacology

Competencies:
Maintain supply of medications
Calculate dosage according to physician's orders
Instruct patients on use of medications
Dispense medications according to medical orders
Evaluate response to medication

Unit: Patient Education

Competencies:
Inform patient/family about diagnostic procedures
Educate patient/responsible party about self-care related to results of diagnostic procedure/therapy
Provide psycho-social care for patient/family
Inform patient about World Health Organization (WHO) immunization requirements

Unit: Examinations

Competencies:
Demonstrate general knowledge of diagnostic studies
Demonstrate principles of body mechanics and ergonomics
Assist with general examination
Assist with eye, ear, nose, and throat examination
Assist with obstetric and gynecological examination
Assist with pediatric examination
Assist with proctology and gastrology examination
Assist with orthopedic examination
Assist with neurological examination
Assist with geriatric examination

Unit: Laboratory Tests and Diagnostic Procedures

Competencies:

Perform drug screen testing
Perform tuberculosis testing
Perform specimen collection and handling
Assist with allergy testing
Perform manual and automated tests of complete blood count
Perform serological tests
Perform electrocardiograms
Perform diagnostic skills
Demonstrate laboratory procedures in clinical chemistry
Demonstrate laboratory procedures in hematology/coagulation
Demonstrate laboratory procedures in immunohematology
Demonstrate laboratory procedures in microbiology
Demonstrate laboratory procedures in immunology
Demonstrate laboratory procedures in urinalysis
Demonstrate safe phlebotomy techniques
Administer laboratory management skills

Unit: Radiography

Competencies:

Identify characteristics of x-radiation
Explain how x-rays are produced
Describe effects of radiation on the human body
Demonstrate knowledge of pathological processes that affect radiographic imaging
Practice radiation safety procedures in accordance with OSHA andEPA
Demonstrate knowledge of equipment
Demonstrate general knowledge of diagnostic radiology procedures
Ready equipment and materials for radiographic procedures
Perform radiographic equipment check procedures
Provide accurate radiographic record identification andretrieval
Ready patient for radiographic procedures
Perform radiographic procedures
Perform venipuncture and IV management
Expose radiographic film
Process exposed radiographic film
Store radiographs and unexposed film
Maintain supply inventory

Unit: Respiratory Care

Competencies:

Identify respiratory care uses
Prepare non-life support respiratory therapy equipment for patient use
Prepare life-support equipment for patient use
Manage airway
Perform rehabilitation
Manage pharmacological agents
Perform assessment
Prepare diagnostic equipment for patient use
Demonstrate proper procedures for using flowmeters, regulators, gauges, and compressed gas cylinders
Disinfect or sterilize respiratory therapy equipment
Change non-life support equipment in patient care areas of a hospital
Demonstrate proper procedures for changing flowmeters, regulators, gauges, and compressed gas cylinders
Test respiratory therapy equipment for proper operation and patient readiness
Demonstrate proper safety precautions in the transport and delivery of equipment
Transport samples to laboratory
Perform hemodynamic monitoring
Operate mechanical ventilator
Perform pulmonary function tests
Perform electrocardiograms
Evaluate chest x-rays
Explain pulmonary pathology
Plan for discharge
Prepare or demonstrate special procedures
Demonstrate therapeutic modalities

Unit: Occupational Therapy

Competencies:

Assist with evaluation
Define patient needs
Incorporate occupational therapy principles in planning
Plan therapeutic measures
Use occupational therapy equipment
Use orthotics
Perform therapeutic measures
Treat patient in functional activities
Engage patient in purposeful activities
Provide therapy for different types of patients

Unit: Physical Therapy

Competencies:

Define patient needs
Monitor patient progress
Develop therapeutic interventions
Perform therapeutic measures
Demonstrate basic knowledge of kinesiology

Unit: The Nursing Process

Competencies:

Perform patient physical assessment
Complete assessment forms
Collect additional patient data
Formulate nursing diagnoses
Formulate patient plan of care
Implement patient-centered care
Provide care for older adult patients
Provide care for maternal/newborn patients
Provide care for medical/surgical patients
Provide care for pediatric patients (including adolescents)
Provide care for the rehabilitation patient
Evaluate patient care
Revise plan of care

Unit: Nursing Communication

Competencies:

Demonstrate effective patient interviewing techniques
Report assessment of patient and nursing actions
Implement a teaching plan for an identified patient learning need
Demonstrate use of research strategies
Apply management skills for patient care
Demonstrate knowledge of the evaluation process necessary for effective management of nursing care
Demonstrate management of multi-patient care
Evaluate trends and issues in health care profession
Explain the scope and standards of nursing practice with patients experiencing complex needs
Implement a developed plan of patient care using the nursing process
Assess the physical and emotional needs of patients and their families with complex disorder conditions
Use therapeutic rationale for nursing procedures
Assist in care of patients suffering psychological and/or emotional trauma

Unit: Nursing Clinical Procedures

Competencies:

Use therapeutic rationale for nursing procedures
Perform activities of daily living skills
Perform equipment skills
Perform non-invasive procedures
Perform invasive procedures
Assist with surgical procedures
Assist with therapeutic measures

Unit: Advanced Nursing Concepts

Competencies:

Demonstrate knowledge of the physical and emotional needs of patients and their families with complex disorders of the cardiovascular system

Demonstrate knowledge of the physical and emotional needs of patients and their families with complex disorders of the renal system

Demonstrate knowledge of the physical and emotional needs of patients and their families with complex disorders of the endocrine system

Demonstrate knowledge of the physical and emotional needs of patients and their families with complex disorders of the neurological system

Demonstrate knowledge of the physical and emotional needs of patients and their families with multisystem disorders across the lifespan

Unit: Medication Use

Competencies:

Maintain supply of medicatons

Calculate dosage according to physician's orders

Identify methods of administering medications according to physician's orders

Evaluate response to medication

Unit: Pharmacy Technology

Competencies:
Comply with appropriate regulations
Explain laws and administrative rules as they relate to pharmacy technicians
Explain pharmacy safety
Complete prescription information
Apply pharmaceutical calculations
Identify routes of administration
Identify dosage forms
Explain relationship of companion over-the-counter (OTC) products and supplies
Process prescription according to pharmacy policy and regulations
Identify types and uses of containers
Apply compounding and reconstitution skills
Apply packaging skills
Charge medicines
Practice aseptic technique
Reconstitute drugs per specification
Identify facets of alternative nutrition
Prepare daily intravenous solutions
Work in vertical and horizontal laminar hoods
Maintain quality control records and methods
Maintain stock levels
Assist with disposition and recording of controlled substances
Maintain prescription data and records
Practice accuracy
Practice time management
Record medications

Unit: Clinical Chemistry

Competencies:

Use terminology related to clinical chemistry
Prepare solutions
Handle blood specimens for analysis
Handle body fluids for chemical analysis
Perform kidney function and clearance tests
Perform liver function tests
Perform glucose tests
Perform protein tests
Perform electrolytes tests
Perform carbon dioxide tests
Perform blood gas tests
Explain mineral metabolism
Perform enzyme analysis
Perform thyroid gland tests
Perform tests for gout
Perform miscellaneous tests
Use laboratory instruments
Maintain laboratory instruments

Unit: Immunohematology

Competencies:

Use terminology related to immunohematology
Explain antigens and antibodies
Describe antibodies
Describe subgroups of A
Describe enzyme tests
Describe Rh nomenclatures
Perform Du test
Describe M and N systems
Type blood
Crossmatch blood
Use Rho(d) immune globin criteria
Detect cold agglutinins
Elute antibodies
Draw blood from donors
Operate blood bank

Unit: Immunology and Serology

Competencies:
Use immunology and serology terminology
Perform immunologic examination
Test for syphilis
Perform VDRL, RPR, and PCT tests
Perform agglutination tests
Perform immunologic and serologic procedures
Explain tests for other viruses

Unit: Bacteriology

Competencies:
Use terminology related to bacteriology
Identify types and uses of culture media
Culture specimens
Prepare culture media
Stain smears
Perform differentiating tests
Identify gram-positive cocci
Identify gram-positive bacilli
Identify gram-negative cocci
Identify gram-negative enterobactereaceae
Identify gram-negative bacilli
Perform antimicrobial sensitivity testing
Use bacterial identification systems
Culture specimens
Perform routine mycology procedures
Perform special tests

Unit: Parasitology

Competencies:
Use parasitology-related terminology
Perform examinations for parasites
Perform tests for blood parasites
Perform tests for fats and occult blood
Stain for ova and parasites

Unit: Urinalysis

Competencies:
Use terminology related to urinalysis
Identify properties of urine
Explain principles of urine tests
Perform special tests
Identify cells found in urine
Identify casts found in urine
Identify foreign matter found in urine

Unit: Hematology

Competencies:
Use hematology terminology
Demonstrate knowledge of erythrocytes
Perform erythrocyte tests
Demonstrate knowledge of granulocytes, lymphocytes, and monocytes
Prepare blood smear stains
Perform blood counts and tests
Perform body fluid counts
Perform sperm counts
Perform coagulation and hemostasis tests
Maintain related instruments and equipment
Perform quality control

Unit: Histology

Competencies:
Perform set-up and workflow functions
Perform dissecting functions
Perform proper embedding of specimens
Perform routine histology procedures
Perform special stains
Perform quality control and assurance functions
Operate histology equipment
Store materials safely
Perform record keeping functions

Unit: Phlebotomy

Competencies:

Demonstrate knowledge of health care institutions and departments in which a phlebotomist functions

Identify the phlebotomist's role as a member of a health care team

Describe collection equipment, reagents, and interfering factors in blood collection

Describe proper blood collection procedure, including handling complications that may arise

Demonstrate knowledge of the disease process route of infection, infection control, and equipment safety

Explain the protocol for communication, transport, and processing specimens

Apply quality control and safety procedures

Describe basic concepts of communications, stress management, professional behavior, and the legal implications of the health-related work environment

Unit: First Responder

Competencies:

Describe roles and responsibilities of the First Responder
Demonstrate knowledge of medicolegal aspects
Assess vital signs of a sick or injured person
Use medical identification devices
Conduct a primary assessment of problems that threaten life if not corrected immediately
Demonstrate BLS/CPR procedures
Control bleeding
Identify early signs and symptoms of shock
Use mechanical aids for securing an airway and assisting ventilation/oxygenation
Provide secondary assessment
Differentiate between a medical emergency and trauma situation
Care for patient in medical emergency
Care for patient with traumatic injury
Identify musculo-skeletal injuries
Identify potential for spinal injury
Describe emergency evacuation and transfer of a sick or injured person from an unsafe environment/location
Care for various patient needs
Care for patient who has ingested a poisonous substance
Care for patient who is burned
Care for patient suffering from an environmental emergency
Care for patients with special needs
Provide triage to victims of multiple casualty incidents
Differentiate between life-threatening and non life-threatening entrapment situations
Assist with emergency childbirth

Unit: Emergency Medical Technology

Competencies:

Describe roles and responsibilities of the Emergency Medical Technician (EMT)
Apply Center for Disease Control (CDC) guidelines
Apply aseptic and sterilizing principles
Conduct patient assessment for illness/injuries
Treat airway obstruction and respiratory arrest
Treat cardiac arrest
Treat bleeding and shock
Treat soft tissue injuries
Treat musculo-skeletal injuries
Treat injuries of the head, neck, face, eye, and spine
Treat injuries to the chest, abdomen, and genitalia
Treat medical emergencies
Assist with emergency childbirth
Demonstrate care for the pediatric patient
Treat burns
Treat environmental emergencies
Manage victims of hazardous materials incidents
Manage special care situations
Demonstrate extrication
Maintain patient safety
Describe mass casualty incidents
Demonstrate knowledge of systems operation

Unit: Emergency Medical Services

Competencies:

Demonstrate knowledge of the paramedic profession
Describe emergency medical services (EMS) systems
Demonstrate EMS communication systems
Demonstrate rescue techniques and extrication
Describe major incident response
Demonstrate knowledge of patient assessment and initial management
Manage airway and ventilation
Manage shock
Demonstrate knowledge of pharmacology
Manage trauma emergencies
Manage burn injuries
Manage respiratory emergencies
Manage cardiovascular emergencies
Manage endocrine emergencies
Manage neurological emergencies
Manage digestive, genitourinary, and reproductive emergencies
Manage anaphylaxis emergencies
Manage toxicology, alcoholism, and drug abuse emergencies
Manage infectious diseases
Manage environmental injuries
Manage geriatric emergencies
Manage pediatric emergencies
Manage the gynecologic patient
Manage the obstetric patient
Manage the neonate
Manage behavioral emergencies
Demonstrate paramedic skills
Maintain current certifications and continuing education

Unit: Oral Anatomy and Pathology

Competencies:
Identify dento-osseous structures
Identify facial muscles
Explain neurology of head and neck
Describe vascular system of the head
Describe developmental abnormalities
Describe dental caries
Describe pulpal and periapical disease
Describe tissue changes in response to physical or chemical injury in the oral cavity
Describe neoplasms of oral cavity
Describe odontogenic cysts and neoplasms
Describe treatment of patients with special needs

Unit: Chairside Procedures

Competencies:
Perform patient assessment
Prepare patient
Maintain dental operatory
Provide evacuation and retraction in compliance with OSHA, EPA, and ODPA
Use dental instruments
Transfer instruments
Explain instrumentation
Use instruments
Sharpen instruments
Assist with preliminary examination
Assist with administering anesthetic
Assist with application of rubber dam
Assist with anterior restoration and aesthetic dental procedures
Assist with in-office bleaching procedures
Assist with home-bleaching procedure
Assist with posterior restoration

Unit: Dental Restoration

Competencies:
Describe tooth arrangement
Identify edentulous arches
Describe jaw relationships
Describe impression and cast materials
Use impression trays
Use baseplate materials
Use occlusal rims
Describe model pouring and die preparation techniques
Describe restorative waxing techniques
Describe crown and bridge spruing and investing techniques
Describe metal adaptation and finishing
Explain denture flasking
Explain denture processing
Explain denture recovery
Explain selective grinding
Explain denture finishing and polishing
Describe denture fabrication
Explain denture repair and maintenance

Unit: Partial Denture Fabrication

Competencies:
Describe partial denture design
Describe refractory model duplication
Describe wax pattern adaptation
Describe partial framework spruing and investing techniques
Describe metal adaptation and finishing

Unit: Orthodontics

Competencies:
Explain orthodontic treatment as a dental specialty
Explain components of orthodontic appliances
Explain the principles of wire bending
Demonstrate orthodontic appliance repair
Explain temporomandibular splints
Explain orthodontic records
Describe miscellaneous functions
Describe orthodontic office procedures

Unit: Extraoral and Intraoral Examinations

Competencies:
Explain examination procedures
Apply techniques of inspection
Describe periodontium
Examine teeth

Unit: Preventive Oral Hygiene Procedures

Competencies:
Describe plaque and soft deposits
Describe dental calculus and stains
Describe scaling and root planing
Remove plaque and stains from teeth
Remove hard deposits
Describe oral disease control
Apply fluorides
Use desensitizing agents
Assist with pit and fissure sealants

Unit: Dental Morphology

Competencies:
Explain dental physiology
Explain arrangement of teeth and occlusion
Describe deciduous teeth
Describe permanent teeth

Unit: Dental Radiography

Competencies:
Identify characteristics of radiation
Explain how x-rays are produced
Describe effects of radiation on the human body
Identify structures through the use of radiographs
Apply knowledge of the process for developing radiographs
Maintain unexposed film
Identify anatomic landmarks
Describe errors in dental radiographic technique
Expose films
Process radiographs manually
Process radiographs automatically
Mount radiographs
Apply bisecting technique to expose a full-mouth survey
Apply paralleling technique to expose a field-mouth survey
Complete full-mouth survey on child DXTTR or patient
Complete full-mouth survey on adult DXTTR or patient
Completely full-mouth survey on edentulous patient

Unit: Preventive Dental Assisting Procedures

Competencies:
Assist with prophylaxis
Administer topical fluoride
Instruct patient about oral hygiene and nutrition

Unit: Dental Specialties

Competencies:
Assist with oral surgery
Assist with pediatric dentistry
Assist with endodontics
Assist with fixed prosthodontics
Assist with periodontics
Assist with removable prosthodontics
Assist with public health dentistry
Perform direct patient services

Unit: Dental Materials I

Competencies:
Demonstrate knowledge of dental laboratory materials
Explain dental laboratory material properties

Unit: Dental Materials II

Competencies:
Demonstrate use of impression materials
Use dental cements, liners, and varnishes
Use restorative materials
Demonstrate dental laboratory procedures

Unit: Dental Laboratory Procedures

Competencies:
Describe dental material factors
Construct occlusion rims
Assist with fabrication of temporary crowns
Prepare laboratory case for shipping

Unit: Dental Hygiene

Competencies:

Explain functions and pathologies of dental-related anatomy
Maintain dental instruments and equipment
Assist with dental office emergency care
Apply anesthesia
Perform preventive dentistry techniques

Unit: Health Information Processing

Competencies:

Assemble medical records
Perform quantitative analysis on patient's health record
Maintain health record locator system
Abstract information from a health record
Transcribes recorded dictation
Prepare health record for court of deposition

Unit: Health Information Maintenance

Competencies:

Trace lost record
Maintain a tumor registry
Code diagnoses and procedures using the current modification of the International Classification of Diseases (ICD-9-CM)
Assign Major Diagnostic Classification (MDC) and Diagnostic Related Groups (DRGs)
Code diagnoses and procedures using Current Procedural Terminology (CPT-4) methodology
Maintain computer files

Unit: Health Information Clerical Functions

Competencies:
Compose electronic correspondence
Transcribe recorded dictation
Input data on computer
Distribute information
Maintain filing system
Prepare health record for microfilming
Maintain office equipment and supplies

Unit: Health Information Quality Control

Competencies:
Perform qualitative analysis on patient's health record
Prepare report for physician's incomplete records
Evaluate procedure for release of patient information
Evaluate procedure for health record analysis
Evaluate procedures for abstracting and coding
Evaluate procedure for transcribing medical records
Perform quality review
Conduct utilization review process
Prepare materials for accreditation
Validate data for patient-related information system needs
Analyze data for patient-related information system needs

Unit: Health Information Report Preparation

Competencies:
Prepare census reports
Gather data to support patient-related information system needs

Unit: Health Information Supervision

Competencies:
Design departmental services and operational systems
Identify resources to support departmental operations
Execute plan(s) for implementing departmental services
Evaluate effectiveness of departmental services

ALLIED HEALTH TECHNOLOGIES

TECH PREP COMPETENCY PROFILE

AUGUST 1995

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TECH PREP COMPETENCY PROFILE
ALLIED HEALTH TECHNOLOGIES

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Lakeland Tech Prep Consortium TCP Definitions
Allied Health Technologies Cluster
June 21-22, 1994

Radiography Technologist... Performs diagnostic examinations/procedures under the supervision of a radiologist. Skills include, but are NOT limited to:

- performing diagnostic x-ray procedures
- performing mammography procedures
- equipment operation and maintenance
- patient preparation and record keeping
- patient assessment and education
- quality assurance monitoring

Respiratory Therapist... Performs therapeutic, diagnostic, and life-support procedures using cardiopulmonary equipment under the supervision of a physician. Skills include, but are NOT limited to:

- administering medications and oxygen via mist, mask, tent, or other modalities
- managing ventilators and other intensive care therapies
- emergency procedures and airway management
- equipment operation and maintenance
- storage, safety and sterilization methods
- record keeping
- education for patient, family and community
- assessing patients, consulting with physicians, and developing patient care plans

Medical Laboratory Technician... Performs medical laboratory procedures and routines under the supervision of a physician or laboratory director. Skills include, but are NOT limited to:

- laboratory instrument operation and maintenance
- medical laboratory procedures, including hematology, chemistry, bacteriology, and immunohematology
- equipment and sample inventorying and storage
- laboratory safety procedures, record keeping, and quality control
- perform basic blood drawing skill (phlebotomy)
- computer friendly

Histology Technician (Histotechnician)... Histology is the study of tissue. Involves preparation of patients' tissue samples under the supervision of a pathologist. Skills include, but are NOT limited to:

- medical laboratory procedures, specifically histology
- cutting of both frozen and paraffin embedded tissue, mounting and staining slides
- laboratory and chemical safety procedures and record keeping
- information systems experience
- principles (chemical and biological) of tissue staining

LAKELAND TECH PREP CONSORTIUM
ALLIED HEALTH TECHNOLOGIES

RELATED SKILLS, TRAITS AND KNOWLEDGE

(Cited as desirable by health care representatives on June 21-22, 1994)

General Math - Algebra
Communications - interpersonal and intrapersonal
Think on feet
Problem solve
Do it - not talk about it
Motivation
Maturity*
Privacy issues
Computers (keyboard)
Assessment skills
Good chemical hygiene
Part-time experience
Good work habits
Physics
Biology
Lab equipment experience
Willingness to update skills (lifelong learning)
Flexibility
Teamwork
Interest in field (more than job)
Prioritize tasks
Organization skills
Ethics
Respect for authority
Adaptability to change
Cultural diversity appreciation
Compassion
English (writing skills)

Lakeland Tech Prep Consortium
Tech Prep Competency Profile
Allied Health Technologies
August 1995

RA	Radiography Technologist
RE	Respiratory Therapist
ML	Medical Laboratory Technician
HT	Histologic Technician

Pg	Unit	RA	RE	ML	HT
1	1. Communications Literacy	X	X	X	X
15	2. Mathematics Literacy	X	X	X	X
23	3. Science Literacy	X	X	X	X
36	4. Technology Literacy	X	X	X	X
37	5. Infection Control and Risk Management	X	X	X	X
42	6. Medical Terminology	X	X	X	X
43	7. Anatomy, Physiology, and Pathology	X	X	X	X
50	8. Medical Law and Ethics	X	X	X	X
52	9. Vital Signs	X	X	O	O
55	10. First Aid and Medical Emergencies	X	X	X	O
56	11. Patient Education	X	X		
57	12. Nutrition	X	X	X	
58	13. Basic Pharmacology	X	X	X	
60	14. Specimen Collection and Handling	O	O	X	O
62	15. Psychology of Stress	X	X	X	X
64	16. Psychology of Human Relations	X	X	X	X
67	17. General Administrative Support	X	X	X	X
70	18. Computer Literacy	X	X	X	X
72	19. Teamwork	X	X	X	X
74	20. Employability Skills	X	X	X	X
80	21. Professionalism	X	X	X	X
84	22. Radiography	X			
91	23. Respiratory Care		X		
104	24. Histology				X
111	25. Hematology			X	
116	26. Clinical Chemistry			X	
125	27. Immunohematology			X	
130	28. Immunology and Serology			X	
132	29. Bacteriology			X	
136	30. Parasitology			X	
138	31. Urinalysis			X	

O = Not critical for college exit, but would assist student in acquiring job at high school exit.

TECH PREP

LAKELAND TECH PREP CONSORTIUM

TECH PREP COMPETENCY PROFILE

ALLIED HEALTH TECHNOLOGIES

August 1995

Key:
10 = by the end of grade 10
12 = by the end of grade 12
AD = by the end of Associate Degree program
LL = Lifelong Learning due to Technological Change
WS = On-job-training that occurs at actual Work Site

I = Introduce
R = Reinforce
C = Competent for entry level position

Unit 1: Communications Literacy (Ohio's Language Arts Model 9-12) * = Health care industry representatives identified these competencies appropriate to be taught in the context (applied) of the Allied Health occupations # = Teachers identified these competencies also appropriate to be taught in the context (applied) of the Allied Health occupations Note: The remaining competencies are to be taught using regular or applied methods.	10	12	AD	LL	WS
Subunit 1.1: Reading - Structure					
*# C1.1.1 Exhibit knowledge of language structure					
*# C1.1.2 Recognize that there may be more than one interpretation of reading selections					

Unit 1: Communications Literacy *(continued)* **(Ohio's Language Arts Model 9-12)** *** = Health care industry representatives identified these competencies appropriate to be taught in the context (applied) of the Allied Health occupations** **# = Teachers identified these competencies also appropriate to be taught in the context (applied) of the Allied Health occupations** **Note: The remaining competencies are to be taught using regular or applied methods.**	10	12	AD	LL	WS
Subunit 1.1: Reading - Structure (continued)					
C1.1.3 Recognize various literary devices					
C1.1.4 Recognize and discuss literary elements					
*# C1.1.5 Develop and use an increasingly sophisticated vocabulary gained through context					
# C1.1.6 Apply knowledge of language structure to reading					
*# C1.1.7 Explain why there may be more than one interpretation of reading selections					
C1.1.8 Recognize effect of literacy devices on meaning					
C1.1.9 Analyze author's use of literary elements					
*# C1.1.10 Recognize relationship of structure to meaning					
C1.1.11 Describe various interpretations and meaning levels in reading selections					
C1.1.12 Characterize author's use of literary devices					
C1.1.13 Characterize use of literary techniques					
C1.1.14 Critique a variety of literature with regard to plot, dialogue, theme, setting, and characterization					
*# C1.1.15 Apply an expanding vocabulary gained through reading					
* C1.1.16 Explain various interpretations and meaning levels in reading selections					
C1.1.17 Analyze use of literary techniques (e.g., extended metaphor, simile, personification,hyperbole, pun, alliteration)					
C1.1.18 Understand use of literary devices (e.g., irony, satire, allegory, onomatopoeia)					
C1.1.19 Analyze and synthesize pieces of literature with regard to plot, dialogue, theme, setting, and characterization					

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Unit 1: Communications Literacy *(continued)*

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	Subunit 1.2:	**Reading - Meaning Construction**					
*#	C1.2.1	Demonstrate ability to recognize appropriate pre-reading strategies					
	C1.2.2	Describe effectiveness of a reading selection					
*#	C1.2.3	Read to clarify personal thinking and knowledge					
*#	C1.2.4	Support interpretation of text by locating and citing specific information					
	C1.2.5	Develop personal response to a variety of literary works					
	C1.2.6	Recognize diverse literary interpretations					
*#	C1.2.7	Engage in self-selected reading activities					
*#	C1.2.8	Confirm and extend meaning in reading by researching new concepts and facts					
	C1.2.9	Self-monitor and apply corrective strategies when communication has been interrupted or lost					
	C1.2.10	Use features of literary genres to extend meaning					
*	C1.2.11	Assess effectiveness of a selection read					
*#	C1.2.12	Use reading as a possible problem-solving strategy to clarify personal thinking and knowledge					
	C1.2.13	Use knowledge of semantic elements (e.g., figurative language, denotation,connotation, dialect) to clarify meaning when reading					
	C1.2.14	Predict, recognize, interpret, and analyze themes based on familiarity with author's work					
	C1.2.15	Compare and contrast literary genres					
#	C1.2.16	Assess validity and quality of selection read					
*#	C1.2.17	Clarify meaning when reading					
	C1.2.18	Compare personal reaction to critical assessment of a literary selection					
	C1.2.19	Assess validity of diverse literary interpretations					

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			10	12	AD	LL	WS
		Subunit 1.2: Reading - Meaning Construction (continued)					
*#	C1.2.20	Use reference books to find, evaluate, and synthesize information					
	C1.2.21	Identify tone of a literary work					
	C1.2.22	Critique validity of diverse literary interpretations					
	C1.2.23	Integrate personal reaction to and critical assessment of a literary selection					
		Subunit 1.3: Reading - Application					
*#	C1.3.1	Select and read material for personal enjoyment and information					
*#	C1.3.2	Read a variety of complete, unabridged works					
*#	C1.3.3	Employ various reading strategies according to purpose					
*	C1.3.4	Participate in selection of books, materials, and topics for literature study groups					
	C1.3.5	Develop and apply knowledge of the interrelationship of concepts					
	C1.3.6	Read selections from a variety of styles and formats, recognizing that style and format influence meaning					
*#	C1.3.7	Extend value of reading, writing, speaking, viewing, and listening by pursuing, through reading, new concepts and interests developed as a result of these activities					
	C1.3.8	Read extensively from a particular author's work and explain elements of author's style					

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Subunit 1.4: Reading - Multidisciplinary					
C1.4.1 Connect themes and ideas across disciplines through literature					
*# C1.4.2 Read to facilitate learning across curriculum					
C1.4.3 Read to develop awareness of human rights and freedom					
C1.4.4 Participate actively in a community of learners					
C1.4.5 Recognize and explain interaction between literature and various cultural domains (e.g., social technological, political, economic)					
C1.4.6 Explore and analyze a variety of cultural elements, attitudes, beliefs, and value structures by men and women of many racial, ethnic, and cultural groups					
*# C1.4.7 Value thinking and language of others					
C1.4.8 Relate literature to historical period about which or in which it was written					
*# C1.4.9 Read to facilitate content learning					
Subunit 1.5: Writing—Structure					
C1.5.1 Develop and expand a repertoire of organizational strategies (e.g., narration, comparison/contrast, and description) through a practice and discussion					
*# C1.5.2 Clarify word choice according to audience, topic, and purpose					
*# C1.5.3 Locate and correct errors in usage, spelling, and mechanics using a variety of resources					
C1.5.4 Recognize information gained from primary and secondary sources					
*# C1.5.5 Develop writing which contains ordered, related, well-developed paragraphs with sentences of varied lengths and patterns					
*# C1.5.6 Use information from a variety of sources to develop an integrated piece of writing					

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	Subunit 1.5:	**Writing - Structure (continued)**					
*#	C1.5.7	Evaluate and revise writing to focus on such things as audience, tone, and purpose					
*#	C1.5.8	Recognize differences between documentation and reference list styles					
*#	C1.5.9	Develop extended pieces of writing which contain ordered, related, well-developed paragraphs with sentences of varied lengths and patterns					
	C1.5.10	Select from a repertoire of organization strategies a pattern appropriate to a topic					
#	C1.5.11	Synthesize information from a variety of sources					
	C1.5.12	Refine word choice and tone according to audience, situation, and purpose					
	C1.5.13	Appropriately cite information gained from primary and secondary sources					
*#	C1.5.14	Use style manuals or software to prepare documentation and reference lists					
	C1.5.15	Develop effectively organized pieces of expository writing containing strong voice, clear thesis, and well-developed ideas					
*#	C1.5.16	Identify organization patterns appropriate to writing topic					
*#	C1.5.17	Respond to others' suggested revisions to a writing piece					
	Subunit 1.6:	**Writing - Meaning Construction**					
	C1.6.1	Demonstrate knowledge of the recursive nature of the writing process by applying it appropriately to various topics, situations, and audiences					
	C1.6.2	Develop criteria for writing evaluation using scoring guides and peer/teacher assistance to clarify meaning					
	C1.6.3	Respond to others' suggested revisions to a piece of writing					
*#	C1.6.4	Use word processing, graphics, and publishing aids to construct meaning in writing					

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Unit 1: Communications Literacy *(continued)*

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	Subunit 1.6:	**Writing - Meaning Construction (continued)**					
*#	C1.6.5	Engage in self-initiated writing activities					
	C1.6.6	Incorporate personal criteria with generally accepted standards for writing evaluation					
*#	C1.6.7	Evaluate, analyze, and synthesize information for writing					
	C1.6.8	Evaluate own writing using personal and established scoring criteria					
	C1.6.9	Assess personal/peer revisions to a writing piece					
*#	C1.6.10	Recognize and refine personal writing styles					
	Subunit 1.7:	**Writing - Application**					
*	C1.7.1	Apply appropriate writing techniques suitable for varied writing tasks					
*#	C1.7.2	Use sentence-combining techniques to improve syntactic fluency and maturity					
*#	C1.7.3	Write in response to prompted and self-selected topics in practical, persuasive, descriptive, narrative, and expository domains					
*#	C1.7.4	Develop personal voice in writing					
*#	C1.7.5	Consider audience and purpose for writing					
*#	C1.7.6	Develop criteria for selection and potential development of topic					
*#	C1.7.7	Write in a journal or learning log to clarify personal thinking and knowledge					
*#	C1.7.8	Apply an expanding vocabulary gained through writing					
*#	C1.7.9	Make judicious use of reference sources (e.g., dictionary, thesaurus, on-lien data base, encyclopedia)					
*#	C1.7.10	Demonstrate, an appreciation for aesthetically pleasing language through word choice and style					
	C1.7.11	Apply revising and editing strategies needed for writing task					

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	Subunit 1.7:	**Writing - Application** (continued)					
*#	C1.7.12	Vary sentence lengths and patterns					
*#	C1.7.13	Refine personal voice in writing					
*#	C1.7.14	Vary styles and formats for intended purpose and audience					
*#	C1.7.15	Apply criteria for selection and development of topic					
*#	C1.7.16	Participate in peer review of writing in progress					
*#	C1.7.17	Use transitions between sentences, ideas, and paragraphs in writing					
*#	C1.7.18	Revise and edit papers extensively in preparation for presentation/publication					
	C1.7.19	Develop a variety of genres					
*#	C1.7.20	Focus writing and tone on such elements as audience, situation, and purpose					
*#	C1.7.21	Develop topic fully and appropriately					
*#	C1.7.22	Use writing process to clarify personal thinking and knowledge					
	C1.7.23	Apply appropriate recursive writing process as suggested by writing task and writer's process					
	C1.7.24	Develop an extended piece of writing					
	C1.7.25	Revise writing and tone to assure focus on such elements as audience, situation, and purpose					
*#	C1.7.26	Use writing process to write reflectively					

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			10	12	AD	LL	WS
	Subunit 1.8:	**Writing - Multidisciplinary**					
*#	C1.8.1	Use writing process for learning across curriculum					
	C1.8.2	Use writing process to demonstrate knowledge of need for human rights and freedom					
	C1.8.3	Value and apply collaborative skills in writing process					
*#	C1.8.4	Write in response to reading, speaking, viewing, and listening					
*#	C1.8.5	Use multidisciplinary resources in writing projects					
*#	C1.8.6	Use writing process to facilitate learning across curriculum					
	C1.8.7	Recognize value of and engage in collaboration in writing process					
	C1.8.8	Use communication processes to develop a published writing piece in collaboration with others					
	C1.8.9	Record experiences and observations related to content learning					
	C1.8.10	Apply collaborative skills in writing process					
	C1.8.11	Write collaboratively with peers					
	C1.8.12	Use cross-disciplinary resources in writing projects					
	Subunit 1.9:	**Listening/Visual Literacy - Structure**					
*#	C1.9.1	Listen to and view a wide variety of genres					
	C1.9.2	Become aware of an author's style through listening and viewing a variety of works					
*#	C1.9.3	Recognize correct and appropriate grammar, diction, and syntax					
*#	C1.9.4	Expand vocabulary through listening to and viewing varied media					
	C1.9.5	Recognize beauty of language					
	C1.9.6	Enhance recognition of an author's style through listening and viewing a variety of works					

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	Subunit 1.9:	**Listening/Visual Literacy - Structure (continued)**					
*#	C1.9.7	Recognize use and misuse of language in media					
	C1.9.8	Refine knowledge of style through listening and viewing multiple works by the same author					
*#	C1.9.9	Expand and refine grammar, diction, and syntax through listening					
	C1.9.10	Compare authors' styles through viewing and listening to their works.					
*#	C1.9.11	Expand knowledge of complex grammar, diction, and syntax issues					
	Subunit 1.10:	**Listening/Visual Literacy - Meaning Construction**					
*#	C1.10.1	Develop critical thinking skills necessary to evaluate media and assess oral presentations					
*#	C1.10.2	Compare new oral texts to past experiences and knowledge in order to enhance comprehension					
	C1.10.3	Recognize how rhythmic patterns, silence, and cadences enhance quality of speech and literature					
	C1.10.4	Focus listening and viewing on themes and/or plots					
*#	C1.10.5	Gather information from listening and viewing experiences to enhance research					
*#	C1.10.6	Use critical thinking skills to evaluate media and oral presentations					
	C1.10.7	Use prior knowledge and experiences to facilitate comprehension of new oral texts					
	C1.10.8	Identify rhythmic and time patterns in speech and literature					
	C1.10.9	Identify and analyze themes and/or plots when listening and viewing					
*#	C1.10.10	Use information gathered from listening and viewing experiences to expand research					
	C1.10.11	Enhance use of critical thinking skills to evaluate media and oral presentations					

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Subunit 1.10: Listening/Visual Literacy - Meaning Construction (cont)					
# C1.10.12 Consider prior knowledge and experiences when attempting to understand the meaning of new texts					
C1.10.13 Appreciate rhythmic and time patterns of speech and literature					
C1.10.14 Select viewing and listening materials to support written text					
# C1.10.15 Evaluate media and oral presentations analytically and critically					
C1.10.16 Organize prior knowledge and experiences to comprehend new texts					
# C1.10.17 Organize and use viewing and listening materials to support written text					
Subunit 1.11: Listening/Visual Literacy - Application					
*# C1.11.1 Listen attentively during oral reading					
*# C1.11.2 Use media as stimuli for learning and thinking					
C1.11.3 Develop knowledge of structure through art, music, and literature					
C1.11.4 Use electronic media to enhance and highlight language learning					
*# C1.11.5 Listen and view for entertainment and enjoyment					
*# C1.11.6 Use technology and other media as means of expressing ideas					

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Subunit 1.12: Listening/Visual Literacy - Multidisciplinary							
*#	C1.12.1	Facilitate learning across curriculum through critical listening and viewing					
*#	C1.12.2	Engage in individual, small-group, and whole-group listening and viewing activities					
	C1.12.3	Develop language arts (e.g., viewing, listening) projects collaboratively					
	C1.12.4	Investigate language and cultural differences through listening and viewing activities					
	C1.12.5	Participate in a community of learners through productive listening					
Subunit 1.13: Oral Communication - Structure							
*#	C1.13.1	Refine oral communication skills					
*#	C1.13.2	Demonstrate knowledge of grammar, usage, and syntax when presenting					
*#	C1.13.3	Select topics and vocabulary suitable to audience					
*#	C1.14.4	Organize notes and ideas for speaking					
*#	C1.14.5	Use language imaginatively					
*#	C1.14.6	Modulate voice to meaning when interpreting literature orally					
*#	C1.14.7	Organize notes and ideas for formal, semiformal and informal presentations of information					
*#	C1.14.8	Refine speaking techniques for formal, semiformal, and informal settings					
*#	C1.14.9	Develop repertoire of organizational strategies for presenting information orally					
*#	C1.14.10	Expand vocabulary to fit topic					
*#	C1.14.11	Select topics suitable to audience, situation, and purpose					
*#	C1.14.12	Select appropriate strategies when organizing notes and ideas for speaking					

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Unit 1: Communications Literacy ***(continued)***

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	Subunit 1.15: Oral Communications - Meaning Construction						
*#	C1.15.1	Make connections between prior knowledge and new information for oral presentations					
*#	C1.15.2	Participate in informal speaking activities					
*#	C1.15.3	Use interviewing techniques to gather information					
*#	C1.15.4	Communicate orally to entertain and to inform					
*#	C1.15.5	Participate in group communication activities					
*#	C1.15.6	Take and organize notes when preparing speech/presentation					
*#	C1.15.7	Interpret texts orally to illustrate meaning					
*#	C1.15.8	Respond to needs of various audiences					
	C1.15.9	Gather and assess information for speaking					
*#	C1.15.10	Communicate orally to inform and persuade					
*#	C1.15.11	Prepare and deliver formal speech/presentation					
#	C1.15.12	Participate in a variety of oral interpretations					
*#	C1.15.13	Assess needs of audience and adjust language and presentation according to their knowledge					
*#	C1.15.14	Analyze and synthesize information for speaking					
	C1.15.15	Describe effectiveness of literary selection					
*#	C1.15.16	Describe topic or idea in order to clarify personal/audience thinking					
*#	C1.15.17	Analyze and synthesize information gathered from a variety of sources for speaking					
	C1.15.18	Describe validity and/or quality of a literary selection and justify selection					
	C1.15.19	Interpret orally a variety of literature					
*#	C1.15.20	Describe topic or idea to clarify meaning for others					

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Unit 1: Communications Literacy *(continued)*

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			10	12	AD	LL	WS
	Subunit 1.16: Oral Communications - Application						
#	C1.16.1	Become proficient at using interviewing techniques					
	C1.16.2	Give an oral interpretation for a specific audience					
	C1.16.3	Develop and apply oral communication skills for cooperative/collaborative learning					
*#	C1.16.4	Use oral communication for a variety of purposes and audiences (e.g., negotiations, book reviews, rationales)					
*#	C1.16.5	Develop and apply decision-making strategies					
#	C1.16.6	Practice interviewing techniques					
	C1.16.7	Apply interviewing techniques to purposeful interviews					
	C1.16.8	Focus oral interpretation on a specific audience					
	Subunit 1.17: Oral Communications - Multidisciplinary						
*#	C1.17.1	Value thinking and language of others					
	C1.17.2	Develop oral projects collaboratively					
	C1.17.3	Be involved in individual, small-group, and whole-group language activities					
	C1.17.4	Participate actively in a community of learners					
	C1.17.5	Investigate language and cultural differences through oral language activities					

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Unit 2: Mathematics Literacy
(Ohio's Secondary Mathematics Model 9-12)

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			10	12	AD	LL	WS
		Subunit 2.1: Numbers and Number Relations					
*#	C2.1.1	Compare, order, and determine equivalence of real numbers					
*#	C2.1.2	Estimate answers, compute, and solve problems involving real numbers					
*#	C2.1.3	Compare and contrast real number system, rational number system, and whole number system					
*#	C2.1.4	Extend knowledge to complex number system and develop facility with its operation					
		Subunit 2.2: Measurement					
*#	C2.2.1	Estimate and use measurements					
*#	C2.2.2	Understand need for measurement and probability that any measurement is accurate to some designated specification					
*#	C2.2.3	Understand and apply measurements related to power and work					
*#	C2.2.4	Understand and apply measurement concepts of distance-rate-time problems and acceleration problems					
*#	C2.2.5	Use real experiments to investigate elasticity, heat, sound, electricity, magnetism, light, acceleration, velocity, energy, and gravity					
*#	C2.2.6	Use real-world problem situations involving mass and weight					
*#	C2.2.7	Use real-world problem situations involving simple harmonic motion					
*#	C2.2.8	Establish ratios with and without common units					
*#	C2.2.9	Construct and interpret maps, tables, charts, and graphs as they relate to real-world mathematics					
*#	C2.2.10	Understand and solve rate-change problems					
	C2.2.11	Understand and solve right triangle relationships as they relate to measurement, specifically to Pythagorean theorem					
*#	C2.2.12	Graph and interpret ordered pairs					
*	C2.2.13	Compute total sales from a variety of items					

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Unit 2: Mathematics Literacy *(continued)*

(Ohio's Secondary Mathematics Model 9-12)

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	Subunit 2.2:	**Measurement (continued)**					
*#	C2.2.14	Comprehend and compute rates of growth or decay					
#	C2.2.15	Comprehend, compute, and interpret real problems involving annuities					
*	C2.2.16	Develop an ability to identify real problems and provide possible solutions					
*#	C2.2.17	Express and apply different types of measurement scales					
*#	C2.2.18	Identify area and volume					
	Subunit 2.3:	**Estimation and Mental Computation**					
*#	C2.3.1	Use estimation to eliminate choices in multiple-choice tests					
*#	C2.3.2	Use estimation to determine reasonableness of problem situations in a wide variety of applications					
*#	C2.3.3	Estimate shape of graphs of various functions and algebraic expressions					
*#	C2.3.4	Use mental computation when computer and calculator are inappropriate					
	Subunit 2.4:	**Data Analysis and Probability**					
*#	C2.4.1	Organize data into tables, charts, and graphs					
	C2.4.2	Understand and apply measures of central tendency, variability, and correlation					
*#	C2.4.3	Use curve fitting to predict from data					
	C2.4.4	Use experimental or theoretical probability, as appropriate, to represent and solve problems involving uncertainty					
	C2.4.5	Use computer simulations and random number generators to estimate probabilities					
*#	C2.4.6	Test hypotheses using appropriate statistics					

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Unit 2: Mathematics Literacy *(continued)*
(Ohio's Secondary Mathematics Model 9-12)

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			10	12	AD	LL	WS
	Subunit 2.4:	**Data Analysis and Probability (continued)**					
*#	C2.4.7	Read, interpret, and use tables, charts, and graphs to identify patterns, note trends, draw conclusions, and make predictions					
*	C2.4.8	Identify probabilities of events involving unbiased objects					
*#	C2.4.9	Use sampling and recognize its role in statistical claims					
*#	C2.4.10	Design a statistical experiment to study problem, conduct experiment, and interpret and communicate outcomes					
	C2.4.11	Describe normal curve in general terms and use its properties					
	C2.4.12	Create and interpret discrete probability distributions					
	C2.4.13	Understand concept of random variable					
	C2.4.14	Apply concept of random variable to generate and interpret probability distributions, including binomial, uniform, and chi square					
	Subunit 2.5:	**Algebra**					
*#	C2.5.1	Describe problem situations by using and relating numerical, symbolic, and graphical representations					
*#	C2.5.2	Use language and notation of functions in symbolic and graphing settings					
*#	C2.5.3	Recognize and use equivalent zeros of a function, roots and the solution of an equation in terms of graphical and symbolic representations					
*#	C2.5.4	Describe and use logic of equivalence in working with equations, inequalities, and functions					
*#	C2.5.5	Develop graphical techniques of solution for problem situations involving functions					
*#	C2.5.6	Explore and describe characterizing features of functions					
*#	C2.5.7	Make arguments and proofs in algebraic settings					
*#	C2.5.8	Factor difference of two squares					

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			10	12	AD	LL	WS
	Subunit: 2.5	Algebra (continued)					
*	C2.5.9	Identify slope, midpoint, and distance					
*	C2.5.10	Explore and combine rational functions					
*	C2.5.11	Explore factoring techniques					
*	C2.5.12	Solve quadratic equations by factoring and formula					
*	C2.5.13	Set up and solve linear equations					
*	C2.5.14	Solve systems of linear equations with two variables					
*	C2.5.15	Describe geometric situations and phenomena using variables, equations, and functions					
*#	C2.5.16	Describe measures of central tendency, mean, median, mode, and variance algebraically and graphically					
	C2.5.17	Represent inequalities on number line and in coordinate plane					
*	C2.5.18	Use coordinate arguments in making geometric proofs					
*	C2.5.19	Symbolize transformations of figures and graphs					
*	C2.5.20	Explore geometric basis for functions of trigonometry					
*	C2.5.21	Graph linear functions					
*	C2.5.22	Develop and use vectors to represent direction and magnitude including operations					
*	C2.5.23	Use polar and parametric equations to describe, graph, and solve problem situations					
*	C2.5.24	Represent sequences and series as functions both algebraically and graphically					
*	C2.5.25	Explore recursive functions and procedures using spreadsheets, other computer utilities, and appropriate notions					
*	C2.5.26	Describe and solve algebraic situations with matrices					
*	C2.5.27	Describe and use inverse relationship between functions including exponential and logarithmic					

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			10	12	AD	LL	WS
	Subunit 2.5:	**Algebra (continued)**					
*#	C2.5.28	Analyze and describe errors and error sources that can be made when using computers and calculators to solve problems					
*#	C2.5.29	Decide whether problem situation is best solved using computer, calculator, paper and pencil, or mental arithmetic/estimation techniques					
*	C2.5.30	Explore relationships between complex numbers and vectors					
*	C2.5.31	Make arguments concerning limits, convergence and divergence in context involving sequences, series, and other types of functions					
*	C2.5.32	Represent transformations in plane with matrices					
*	C2.5.33	Contrast and compare algebra's of rational, real, and complex numbers with characteristics of a matrix algebra system					
	C2.5.34	Construct polynomial approximations of a function over specified intervals of convergence					
*	C2.5.35	Examine complex numbers as zeros of functions					
*#	C2.5.36	Translate verbal statements into symbolic language					
*#	C2.5.37	Simplify algebraic expressions					
*#	C2.5.38	Use laws and exponents (including scientific notation)					
	C2.5.39	Expand and extend idea of vectors and linear algebra to higher dimensional situations					
	C2.5.40	Use the idea of independent basis elements for a vector space and associated fundamental concepts of finite dimensional linear algebra					
*	C2.5.41	Develop and communicate arguments about limit situations					
*	C2.5.42	Use matrices to describe and apply transformations					
	C2.5.43	Develop and use polar and parametric equations to represent problem situations					
*	C2.5.44	Explore proofs by mathematical induction					

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			10	12	AD	LL	WS
	Subunit 2.6:	Geometry					
*#	C2.6.1	Create and interpret drawings of three-dimensional objects					
	C2.6.2	Represent problem situations with geometric models and apply properties of figures					
	C2.6.3	Apply Pythagorean theorem					
*#	C2.6.4	Demonstrate knowledge of angles and parallel and perpendicular lines					
	C2.6.5	Explore inductive and deductive reasoning through applications to various subject areas					
	C2.6.6	Translate between synthetic and coordinate representations					
	C2.6.7	Identify congruent and similar figures using transformation with computer programs					
	C2.6.8	Deduce properties of figures using transformations and coordinates					
*#	C2.6.9	Use deductive reasoning					
	C2.6.10	Explore compass and straightedge constructions in context of geometric theorems					
*#	C2.6.11	Demonstrate knowledge of and ability to use proof					
	C2.6.12	Use variety of proof techniques (e.g., synthetic, transformational, and coordinate)					
	C2.6.13	Use variety of proof formats, including T-proof (i.e., two-column) and paragraph proof					
*	C2.6.14	Explore different proof strategies					
	C2.6.15	Investigate different proofs of theorems					
	C2.6.16	Develop knowledge of an axiomatic system					
	C2.6.17	Apply transformations and coordinates in problem solving					
	C2.6.18	Represent problem situations with geometric models and apply properties of figures					
	C2.6.19	Deduce properties of figures using vectors					

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Subunit 2.6: Geometry (continued)					
C2.6.20 Analyze properties of Euclidean transformations and relate translations to vectors					
C2.6.21 Apply vectors in problem solving					
C2.6.22 Develop further knowledge of axiomatic systems by investigating and comparing various geometry's					
Subunit 2.7: Patterns, Relations, and Functions					
C2.7.1 Model real-world phenomena with polynomial and exponential functions					
C2.7.2 Explore relationship between zeros and intercepts of functions					
C2.7.3 Translate among tables, algebraic expressions, and graphs of functions					
C2.7.4 Use graphing calculator or computer to generate graph of a function					
C2.7.5 Explore relationship between a linear function and its inverse					
C2.7.6 Describe and use characteristics of polynomial functions in problem-solving situations					
C2.7.7 Explore conic sections and graph using graphing calculator or computer					
C2.7.8 Apply trigonometric functions to problem situations involving triangles					
C2.7.9 Discover relationships between algebraic description, kind, and properties of conic					
C2.7.10 Explore periodic real-world phenomena using sine and cosine functions					
C2.7.11 Analyze effects of parameter changes on graphs					
C2.7.12 Use graphing calculator or computer to graph functions					
C2.7.13 Develop an knowledge of rational and transcendental functions					

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Subunit 2.7: **Patterns, Relations, and Functions** **(continued)**					
C2.7.14 Understand connections between trigonometric and circular functions					
C2.7.15 Use circular functions to model periodic real-world functions					
C2.7.16 Solve trigonometric equations and verify trigonometric identities					
C2.7.17 Understand connections between trigonometric, exponential, and logarithmic functions and polar coordinates, complex numbers, and series					
C2.7.18 Model real-world phenomena with a variety of functions					
C2.7.19 Graph using polar coordinates					
C2.7.20 Explore graphs in three dimensions					
C2.7.21 Explore functions of several variables					
C2.7.22 Explore recursive functions using spreadsheets and/or programming languages					

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Unit 3: Science Literacy
(Ohio's DRAFT Science Model 9-12)

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			10	12	AD	LL	WS
	Subunit 3.1:	**Scientific Inquiry**					
*#	C3.1.1	Check the appropriateness and accuracy of measures and computations using various strategies (e.g., estimations, unit analysis, determination of significant figures)					
*#	C3.1.2	Use ratios, proportions, and probabilities in appropriate problem situations					
*#	C3.1.3	Translate information from and represent information in various forms with equal ease (e.g., tables, charts, graphs, diagrams, geometric figures)					
*#	C3.1.4	Use existing algebraic formulas and create new ones in appropriate problem-solving situations					
*#	C3.1.5	Estimate and justify probabilities of outcomes of familiar situations based on experimentation and other strategies					
*#	C3.1.6	Invent apparatus and mechanical tools needed to perform unique tasks in various situations					
	C3.1.7	Identify, compare, and contrast different modes of inquiry, habits of mind, and attitudes and dispositions					
*#	C3.1.8	Design investigations that are safe and ethical (i.e., obtain consent and inform others of potential outcomes, risks and benefits, and show evidence of concern for human health and safety, concern for non-human species)					
*#	C3.1.9	Make and read scale drawings, maps, models, and other representations to aid planning and understanding					
*#	C3.1.10	Seek elaboration and justification of data and ideas, and reflect on alternative interpretations of the information					
*#	C3.1.11	Utilize appropriate units for counts and measures					
*#	C3.1.12	Create and use databases (electronic and other) to collect, organize, and verify data and observations					
*#	C3.1.13	Design and conduct investigations with multiple variables					
*#	C3.1.14	Communicate the results of investigations clearly in a variety of situations					
	C3.1.15	Examine relationships in nature, offer alternative explanations for the observations, and collect evidence that can be used to help judge among explanations					

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			10	12	AD	LL	WS
	Subunit 3.1:	Scientific Inquiry (continued)					
	C3.1.16	Trace the development (e.g., history, controversy, and ramifications) of various theories, focusing on supporting evidence and modification with new evidence					
*#	C3.1.17	Select, invent, and use tools, including analog and digital instruments, to make and record direct measurements					
	C3.1.18	Observe and document events and characteristics of complex systems					
	C3.1.19	Explain the influence of perspective (e.g., spatial, temporal, and social) on observation and subsequent interpretations					
	C3.1.20	Create multiple representations of the same data using a variety of symbols, descriptive languages, mathematical concepts, and graphic techniques					
	C3.1.21	Generate testable hypotheses for observations of complex systems and interactions					
*#	C3.1.22	Document potentially hazardous conditions and associated risks in selected homes and public areas					
*#	C3.1.23	Participate in public debates, relying on documented and verified data to construct and represent a position on scientific issues					
*	C3.1.24	Construct and test models of physical, biological, social, and geological systems					
*#	C3.1.25	Read, verify, debate, and, where necessary, refute research published in popular or technical journals of science (e.g., *Discover, Omni, Popular Mechanics*)					
*#	C3.1.26	Explore discrepant events and develop and test explanations of what was observed					
	C3.1.27	Conduct theory-based research using surveys, observational instruments, and other methods					
*#	C3.1.28	Modify personal opinions, interpretations, explanations, and conclusions based on new information					
*	C3.1.29	Analyze error and develop explanations in various domains					

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			10	12	AD	LL	WS
	Subunit 3.1:	**Scientific Inquiry (continued)**					
	C3.1.30	Formulate taxonomic schemes based upon multivariate models that help to explain similarities and differences in form, distribution, behavior, survival, and origin of objects and organisms					
	C3.1.31	Demonstrate various logical connections between related concepts (e.g., entropy, conservation of energy)					
*	C3.1.32	Account for discrepancies between theories and observations					
*#	C3.1.33	Analyze the changes within a system when inputs, outputs, and interactions are altered					
*#	C3.1.34	Create, standardize, and document procedures					
*#	C3.1.35	Determine the sources of significant disparities between the predicted and recorded results and change research procedures to minimize disparities					
	C3.1.36	Research, locate, and propose applications for abstract patterns (e.g., fractals, Fibonacci sequences, string theory, orbitals)					
*#	C3.1.37	Recognize and utilize classification systems for particles, elements, compounds, phenomena, organisms, and others for exploring and predicting properties and behaviors					
	C3.1.38	Suggest and defend alternative experimental designs and data explanations (e.g., sampling, controls, safeguards)					
	C3.1.39	Recognize and communicate differences between questions that can be investigated in a scientific way and those that rely on other ways of knowing					
	C3.1.40	Draw conclusions based on the relationships among data analysis, experimental design, and possible models and theories					
*	C3.1.41	Suggest new questions as a result of reflection on and discussions about their own scientific investigations					

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	Subunit 3.1:	**Scientific Inquiry (continued)**					
*#	C3.1.42	Investigate, assess, and comment on strengths and weakness of the descriptive and predictive powers of science					
	C3.1.43	Create new information from representations of data in a variety of forms (e.g., symbols, descriptive languages, graphic formats) utilizing a variety of techniques (e.g., interpolations, extrapolations, linear regressions, central tendencies, correlations) tendencies, correlations)					
	Subunit 3.2:	**Scientific Knowledge**					
*#	C3.2.1	Investigate various types of dynamic equilibrium (e.g., biological, geological, mechanical, chemical)					
*#	C3.2.2	Investigate the relationship between the rates of energy exchange and the relative energy level of components with systems (e.g., trophic levels of ecosytems, osmosis, rate of heating and cooling, storms)					
*#	C3.2.3	Investigate patterns in the natural world (e.g., heredity, crystalline structures, population and resource distributions, diffraction, dispersion, polarization)					
*#	C3.2.4	Investigate models and theories that help to explain the interactions of components in systems (e.g., conservation of mass, energy, and momentum; foodwebs; natural selection; entropy; plate tectonics; chaos; relativity; social-psychology)					
*#	C3.2.5	Investigate degrees of kinship among organisms and groups of organisms					
*#	C3.2.6	Investigate the limits of the definition of life, and investigate organisms and physical systems that exist at or near these limits (e.g.viruses, quarks, black holes)					
*#	C3.2.7	Investigate estimates and measurements of a wide range of distances and rates of change					
*#	C3.2.8	Investigate the historical development of theories of change over time (e.g., natural selection, continental drift, the big bang, geologic change)					

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			10	12	AD	LL	WS
		Subunit 3.2: Scientific Knowledge (continued)					
*#	C3.2.9	Investigate physical and chemical changes in living and non-living systems (e.g., photosynthesis, weathering processes, glaciation, thermal effects of materials, energy cells)					
*#	C3.2.10	Investigate simulations of nuclear change (e.g., radioactivity, half life, carbon dating)					
*#	C3.2.11	Investigate conservation principles associated with physical, chemical, and nuclear changes					
*	C3.2.12	Formulate descriptions of the impacts of various forms of mechanical and electromagnetic waves on various organisms on each other over time					
*	C3.2.13	Formulate models and hypotheses for patterns in the natural world (e.g., earth structures, transportation systems, migrations, communications, constellations)					
	C3.2.14	Formulate explanations for the influences of objects and organisms on each other over time					
*	C3.2.15	Formulate and interpret explanations for change phenomena (e.g., mass extinctions, stellar evolution, punctuated equilibrium, molecular synthesis)					
*	C3.2.16	Formulate and interpret explanations for the magnitudes of diversity at different periods of geologic time (e.g., mutation, global cataclysms, continental drift, competition, mass extinctions)					
*#	C3.2.17	Formulate interpretations of the structure, function, and diversity in a variety of organisms and physical systems (e.g., DNA and RNA variants, nucleons, interaction particles)					
*	C3.2.18	Formulate understandings of geologic time (e.g., millennia, periods, epochs)					
	C3.2.19	Formulate an understanding of the historical development of the model of the universe					
*#	C3.2.20	Formulate explanations and representations of the production, transmission, and conservation of energy in biological and physical systems (e.g., weather, volcanism, earthquakes, electricity, magnetism, cellular respiration)					

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	Subunit 3.2:	**Scientific Knowledge (continued)**					
*	C3.2.21	Formulate models and hypotheses about patterns in the natural world (e.g., social behavior, molecular structure, energy transformation, entropy, randomness, aging, chaos, hormonal cycles)					
*#	C3.2.22	Formulate interpretations of the relationship between energy exchange and the interfaces between components within systems					
*	C3.2.23	Formulate estimations for the range of energies within and between various phenomena (e.g., thermal, electromagnetic, thermonuclear, chemical, electrical)					
*	C3.2.24	Formulate explanations for the historical development of descriptions of motions interactions and transformations of matter and energy (e.g., classical Newtonian mechanics, special and general relativity, chaos					
*	C3.2.25	Formulate models that can be used to describe fundamental molecular interactions in living and non-living systems (e.g., cell membranes, semiconductors).					
*	C3.2.26	Formulate an understanding of the degree of relationship among organisms and objects based on molecular structure (e.g., proteins, nucleic acids)					
*	C3.2.27	Formulate hypotheses and models that may account for observable events (e.g., electricity and magnetism, gravitation, atoms, bonding, chemical reactions, quantum effects, energy flow on biological systems, predator-prey relationships)					
*	C3.2.28	Formulate models and hypotheses about change over time (e.g., natural selection, speciation, punctuated equilibrium, phyleytic gradualism, stellar evolution, plate tectonics, radioactive decay, quantum mechanical theory)					
	C3.2.29	Formulate lists of limitations and propose refinements of standard classification systems (e.g., periodic table, IUPAC, Linnean, standard model)					

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	Subunit 3.2: Scientific Knowledge (continued)						
*#	C3.2.30	Formulate specific cases of limitations and possible exceptions of theories and principles regarding the interactions of moving objects and organisms (e.g., fluid flow in vessels, motion near the speed of light, Heisenberg uncertainty principle, meteorological prediction, local variation and diversity, predicting earthquakes, energy transport in cellular respiration)					
	C3.2.31	Formulate plans and contingencies that can be used to accommodate for changes to and stresses on systems (e.g., wildlife and habitat management, corrosion prevention, noise abatement, structure design)					
*#	C3.2.32	Formulate models of molecular, atomic, ionic, and subatomic structures and the physical and biological implications of these structures (e.g., genes, nucleons, quarks)					
*#	C3.2.33	Formulate estimates for a wide range of measurements and scales (e.g., angstroms to light years)					
	C3.2.34	Formulate and interpret representations of time from origin to present accounting for phenomena of scale (e.g., smoothness, punctuations, chaos)					
	C3.2.35	Formulate interpretations of the historical development of various theories of possible causes of diversity among physical and biological phenomena (e.g., the works of Aristotle, Mendel, Darwin, McClintock)					
	C3.2.36	Formulate models and hypotheses that can be used to explain the interactions of components within technological and ecological systems					
	Subunit 3.3: Conditions for Learning Science						
	C3.3.1	Participate actively in dialogue about and resolution of community issues					
	C3.3.2	Assess information from various countries in the original language or translated form to ascertain the perspectives of many cultures					

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Unit 3: Science Literacy *(continued)*
(Ohio's DRAFT Science Model 9-12)

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			10	12	AD	LL	WS
	Subunit 3.3: Conditions for Learning Science (continued)						
	C3.3.3	Analyze the scientific ideas presented in science fiction stories and films					
*#	C3.3.4	Perform and repeat investigations to verify data, determine regularity, and reduce the impact of experimental error					
*#	C3.3.5	Present the results of investigations in a variety of forums					
*	C3.3.6	Contribute to the decisions regarding topics for investigation					
*#	C3.3.7	Use various creative means to communicate interpretations of scientific ideas, concepts, phenomena, and events					
*#	C3.3.8	Consider the scientific thinking and language of others					
*#	C3.3.9	Individually and collaboratively produce clearly written representations of investigative results					
*#	C3.3.10	Fulfill responsibilities as part of a research group					
	C3.3.11	Select and utilize resources by various criteria (e.g., efficiency, effectiveness, health, safety) that are appropriate to the investigations being conducted by groups					
*#	C3.3.12	Present persuasive argument based on the scientific aspects of controversial issues					
*	C3.3.13	Collect, store, retrieve, and manipulate information with available technologies alleges that may range from hand processes up through computer applications					
	C3.3.14	Investigate social issues with a scientific perspective (e.g., human rights, wellness, economics, futurism, environmental ethics)					
	C3.3.15	Keep journals of observations and inferences made over an extended period of time and reflecting upon the impact of these recorded ideas on their thinking and actions					
	C3.3.16	Examine the intellect, perspectives, and ethics of notable scientists					
*	C3.3.17	Collect and analyze observations made over extended periods of time and compare these to scientific theories					
*#	C3.3.18	Create presentations of scientific understandings using diverse modes of expressions					

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Unit 3: Science Literacy *(continued)*

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	Subunit 3.3:	**Conditions for Learning Science (continued)**					
*#	C3.3.19	Conduct formal scientific debates in the classroom					
	C3.3.20	Wonder about the likelihood of events that may occur by chance or coincidence					
	C3.3.21	Plan and conduct field trips and experiences for small and large groups					
*	C3.3.22	Analyze the historical context which leads to and has lead to scientific theories					
*#	C3.3.23	Seek information on topics of personal scientific interest from a variety of sources					
	C3.3.24	Conduct learner-developed investigations independently and collaboratively over periods of week and months					
*#	C3.3.25	Listen attentively and critically to presentations of scientific information made by others					
	C3.3.26	Conduct analyses of propaganda related to scientific issues					
	C3.3.27	Perform investigations that require observations over varying periods of time					
	C3.3.28	Experience scientific concepts as interpreted by other cultures through multimedia and local and global specialists					
*	C3.3.29	Access appropriate technology to perform complicated, time-consuming tasks					
	C3.3.30	Relate historical accounts of science to the cultural context in which they were written					
*#	C3.3.31	Work as a contributing member of a collaborative research group					
	C3.3.32	Examine the influences of social and political structures and realities that contribute to inquiry about scientific issues					
#	C3.3.33	Use technology (e.g., desktop publishing, teleconferencing, networking) to communicate scientific ideas					
	C3.3.34	Explore and analyze a variety of perspectives on science (e.g., works by men and women of many racial, ethnic, and cultural groups)					

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	Subunit 3.3: Conditions for Learning Science (continued)						
	C3.3.35	Lead groups of learners of various ages in designing, planning, and conducting science activities					
*#	C3.3.36	Respect the scientific thinking of others and self					
	C3.3.37	Recognize and contrast different epistemologies					
	C3.3.38	Develop possible courses of action in response to scientific issues of local and global concern					
*#	C3.3.39	Determine the validity of research conclusions in relation to the design, performance, and results					
	C3.3.40	Develop multimedia presentations of group and individual research projects and investigations appropriate for a variety of audiences and forums					
	C3.3.41	Produce interesting and scientifically correct stories and present them using various modes of expression					
	C3.3.42	Reflect on the ideas and content found in their own journal records					
*#	C3.3.43	Examine ambiguous results and formulate explanations					
	C3.3.44	Recognize and synthesize the contributions to scientific thought of individuals from many cultures					
	C3.3.45	Construct models and simulations of the component structures and functions of living and non-living entities					
	C3.3.46	Lead multi-age groups in the examination of and planned resolution for scientific issues					
*	C3.3.47	Recognize and choose members of research teams based upon the merit of their ideas and skills					
*	C3.3.48	Construct a portfolio of products, documentation, and self-evaluations of his/her own abilities, skills, and experiences					
	C3.3.49	Synthesize scientific information from a variety of sources					
*	C3.3.50	Evaluate and prioritize scientific issues based upon risk-benefit analyses					
*	C3.3.51	Refining scientific skills from a variety of experiences					

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Unit 3: Science Literacy *(continued)*

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			10	12	AD	LL	WS
	Subunit 3.4: Applications for Science Learning						
	C3.4.1	Answer student-determined questions by designing databases and drawing inferences from the analyses of the information in these data bases					
*#	C3.4.2	Make personal behavior decisions by interpreting information that has a scientific basis					
*#	C3.4.3	Propose courses of action that will validate and demonstrate personal understandings of scientific principles					
	C3.4.4	Guide other learners in their understanding of the interactions of technologies and society at various periods in time					
*	C3.4.5	Promote and carry out practices that contribute to a sustainable environment					
	C3.4.6	Study and propose improvements in public services and systems in their community					
*	C3.4.7	Choose consumer materials utilizing personal and environmental risk and benefit information					
	C3.4.8	Make inferences and draw conclusions using databases, spreadsheets, and other technologies					
*#	C3.4.9	Do simple trouble-shooting on common electrical and mechanical systems, identifying and eliminating possible causes of malfunctions					
	C3.4.10	Construct devices that perform simple, repetitive actions					
	C3.4.11	Investigate the functionality of various geometric shapes in the natural world and the designed world (e.g., translations from spherical to plan representations cause distortions, triangular shapes contribute to rigidity and stability in structures, round shapes minimize boundary for a given capacity)					
*#	C3.4.12	Make decisions regarding personal and public health					
	C3.4.13	Evaluate the social and ecological risks and benefits resulting from the use of various consumer products					
	C3.4.14	Analyze the contributions of advances in technology through history to his/her everyday life					

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Unit 3: Science Literacy *(continued)*
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			10	12	AD	LL	WS
		Subunit 3.4: Applications for Science Learning (continued)					
*	C3.4.15	Identify and reduce risks and threats to a sustainable environment					
*	C3.4.16	Extend the limits of human capabilities using technological enhancements					
*	C3.4.17	Use and recognize various propaganda techniques					
*	C3.4.18	Solve unique problems using the results of systematic analyses					
	C3.4.19	Choose everyday consumer products that utilize recent innovative and pass appropriate performance criteria					
*	C3.4.20	Refine personal career interests through investigations of the diversity of manufacturing, research, service, and invention processes					
	C3.4.21	Predict and investigate the working of toys and tools while controlling and manipulating variables (e.g., friction, gravity, forces)					
*#	C3.4.22	Write, follow, modify, and extend instructions (e.g., equations, algorithms, formulas, flow diagrams, illustrations)					
	C3.4.23	Create products, make inferences, and draw conclusions using databases, spreadsheets, and other technologies					
	C3.4.24	Predict various scenarios and propose solutions to community issues using scientific information (e.g., actuarial tables, census data, topographic maps, incidence data, climatic data)					
*	C3.4.25	Use scientific evidence to consider options and formulate positions about the health and safety of others and him/herself					
	C3.4.26	Search for, use, create, and store objects and information using various strategies and methods of organization and access					
	C3.4.27	Research and write environmental impact statements of his/her own design					
	C3.4.28	Compare school-based science perspectives with those gained through cutting-edge technological applications					

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Unit 3: Science Literacy *(continued)*

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			10	12	AD	LL	WS
	Subunit 3.4:	**Applications for Science Learning (continued)**					
	C3.4.29	Design management plans for natural and human-altered environments (e.g., woodlots, patios, lots, lawns, farmlands, forests)					
*#	C3.4.30	Refine personal career interests					
	C3.4.31	Promote public awareness of the interaction of technology with social issues					
	C3.4.32	Advocate and propose courses of action for local and global scientific issues using global networks					
#	C3.4.33	Use appropriate technologies to prepare and present the findings of investigations incorporating tables, graphs, diagrams, and text					
	C3.4.34	Make informed consumer choices by evaluating and prioritizing information, evidence, and strategies					
	C3.4.35	Develop an informed point-of-view that allows for validation or refutation of the scientific statements and claims of advocated before pursuing courses of action (e.g., contributing support, signing petitions, casting votes)					
*	C3.4.36	Differentiate between observations and inferences in the exploration of evidence related to personal, scientific, and community issues					
	C3.4.37	Develop and write environmental impact and safety and hygiene management plans					
	C3.4.38	Use technology to collect, analyze, and communicate information (e.g., electronic networks, desktop publishing, remote sensing, graphing calculators, satellite telemetry, and others)					
	C3.4.39	Design, construct, and market inventions					

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Unit 4: Technology Literacy

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			10	12	AD	LL	WS
*	C.4.1	Demonstrate a systems view of technology based on the interdependence of social, political, economic, and ecological systems					
	C.4.2	Assess the career, family, and personal development implications of technological change					
*#	C.4.3	Demonstrate continuous learning via technology					
	C.4.4	Demonstrate global appreciation for technology's potential effects on cultures, geographic areas, and the environment					
*	C.4.5	Apply historical perspective on technology to the development and use of new technologies					
*#	C.4.6	Apply diverse technologies to store, access, process, create, and communicate information needed to solve problems					
*#	C.4.7	Apply legal principles and ethical conduct to the use of technology					
*	C.4.8	Demonstrate competency in mathematics, science, social sciences, communication, and computer skills through the analysis, design, and evaluation of technological systems					
*	C.4.9	Analyze the potential of alternative technological systems to solve problems and/or to extend human capabilities					
*	C.4.10	Use a variety of tools, materials, and equipment in solving problems and extending human capabilities					
*	C.4.11	Assess risks and benefits of technological developments from an ecological, economic, social, and political perspective					
*	C.4.12	Value human diversity as part of a team in suggesting, designing, and testing solutions to technological problems					

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C = Competent for entry level

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LAKELAND TECH PREP CONSORTIUM

TECH PREP COMPETENCY PROFILE

ALLIED HEALTH TECHNOLOGIES

August 1995

Key:

10 = by the end of grade 10
12 = by the end of grade 12
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LL = Lifelong Learning due to Technological Change
WS = On-job-training that occurs at actual Work Site

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C = Competent for entry level position

Unit: 5. Infection Control and Risk Management	**10**	**12**	**AD**	**LL**	**WS**
Competency 5.0.1 Comply with local, state, and federal regulations		I	C	✓	✓
Builders: 5.0.1.1 Explain state and federal governmental roles in universal precautions		I	C	✓	✓
5.0.1.2 Comply with Occupational Safety and Health Administration (OSHA) regulations		I	C	✓	✓
5.0.1.3 Comply with Environmental Protection Agency (EPA) regulations		I	C	✓	✓
5.0.1.4 Comply with accrediting agencies		I	C	✓	✓

***Unit:* 5. *Infection Control and Risk Management* (*continued*)**			**10**	**12**	**AD**	**LL**	**WS**
Competency	**5.0.2**	**Comply with environmental safety standards, accident prevention methods, and disaster plans**		I	C	√	√
Builders:	5.0.2.1	Comply with environmental safety rules of facility		I	C	√	√
	5.0.2.2	Demonstrate universal precautions to prevent transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)	I	C	R	√	√
	5.0.2.3	Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures	I	C	R	√	
	5.0.2.4	Demonstrate use of fire and safety equipment	I	C	R	√	
	5.0.2.5	Follow procedures for facility disaster plan	I	C	R	√	√
	5.0.2.6	Demonstrate safety precautions for using equipment and hazardous materials		I	C	√	√
	5.0.2.7	Conduct safety inspection of client area		I	C	√	√
	5.0.2.8	Identify potential hazardous situations		I	C	√	√
	5.0.2.9	Correct or report safety hazards (e.g., spills)	I	C	R	√	√
	5.0.2.10	Prevent safety hazards		I	C	√	√
	5.0.2.11	Complete incident reports for accidents or safety infractions		I	C	√	√
	5.0.2.12	Identify legal implications of accidents in health care facility		I	C	√	√
	5.0.2.13	Explain potential sources of hazards (e.g., fire, electrical, chemical, biological, radioactive)		I	C	√	√
	5.0.2.14	Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)	I	C	R	√	√
	5.0.2.15	Store materials properly		I	C	√	√
	5.0.2.16	Label materials properly		I	C	√	√
	5.0.2.17	Follow manufacturer's instructions for safe operation of all equipment and instruments	I	C	R	√	√

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Unit: 5. Infection Control and Risk Management *(continued)*			10	12	AD	LL	WS
Competency	**5.0.3**	**Maintain personal safety and hygiene**	I	I	C	√	√
Builders:	5.0.3.1	Follow universal precautions	I	C	R	√	√
	5.0.3.2	Use personal protective equipment	I	C	R	√	√
	5.0.3.3	Wear uniform or professional attire		C	R	√	√
	5.0.3.4	Apply principles of aseptic techniques and sterility		C	R	√	√
	5.0.3.5	Practice proper hygiene	I	C	R	√	√
	5.0.3.6	Identify need for immunization against communicable diseases	I	C	R	√	√
	5.0.3.7	Demonstrate proper body mechanics		C	R	√	√
	5.0.3.8	Demonstrate safe and effective sterilizing methods for instruments and equipment		I	C	√	√
	5.0.3.9	Identify at-risk behaviors which promote the spread of HIV/AIDS and/or Hepatitis B	I	C	R	√	√
	5.0.3.10	Differentiate fact from fallacy regarding the transmission of HIV/AIDS and Hepatitis B	I	C	R	√	√
	5.0.3.11	Identify principles of ergonomics		C	R	√	√
	5.0.3.12	Identify common causes of back injuries		C	R	√	√
	5.0.3.13	Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient		C	R	√	√
Competency	**5.0.4**	**Maintain infection control of work area**	I	C	R	√	√
Builders:	5.0.4.1	Identify modes of transmission of infection	I	C	R	√	√
	5.0.4.2	Identify methods for preventing infection transmission	I	C	R	√	√
	5.0.4.3	Identify disinfection techniques		C	R	√	√
	5.0.4.4	Define "nosocomial infection"		C	R	√	√
	5.0.4.5	Identify terms related to cleaning and disinfecting		C	R	√	√
	5.0.4.6	Outline measures to be taken to clean and disinfect		C	R	√	√
	5.0.4.7	Outline flow of dirty equipment and materials		C	R	√	√
	5.0.4.8	Contain used linens		C	R	√	√
	5.0.4.9	Isolate infectious linens		C	R	√	√
	5.0.4.10	Clean work areas	I	C	R	√	√
	5.0.4.11	Disinfect work areas		C	R	√	√

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Unit: 5. Infection Control and Risk Management (continued)	10	12	AD	LL	WS
Competency 5.0.5 Apply aseptic and sterilizing principles		I	C	✓	✓
Builders: 5.0.5.1 Define asepsis		C	R	✓	✓
5.0.5.2 Maintain infection control		I	C	✓	✓
5.0.5.3 Prescrub instruments		I	C	✓	✓
5.0.5.4 Disinfect instruments		I	C	✓	✓
5.0.5.5 Store sterilized equipment and supplies		I	C	✓	✓
5.0.5.6 Maintain quality-control log		I	C	✓	✓
5.0.5.7 Identify methods for sterilizing and disinfecting reusable equipment		I	C	✓	✓
5.0.5.8 Explain why dating of sterilized equipment is necessary		I	C	✓	✓
5.0.5.9 Explain why proper documentation of disinfection and sterilization procedures is necessary		I	C	✓	✓
Competency 5.0.6 Dispose of waste materials in compliance with government regulations		I	C	✓	✓
Builders: 5.0.6.1 Practice safe, sanitary, and sterile procedures		I	C	✓	✓
5.0.6.2 Dispose of noninfectious waste		I	C	✓	✓
5.0.6.3 Dispose of infectious waste		I	C	✓	✓
5.0.6.4 Dispose of hazardous waste		I	C	✓	✓
5.0.6.5 Dispose of needles and sharp instruments properly		I	C	✓	✓
5.0.6.6 Use protective and preventive equipment		I	C	✓	✓
Competency 5.0.7 Demonstrate isolation techniques		I	C	✓	✓
Builders: 5.0.7.1 Describe different types of isolation		I	C	✓	✓
5.0.7.2 Demonstrate mask, gown, and gloving techniques		I	C	✓	✓
5.0.7.3 Demonstrate double bagging technique		I	C	✓	✓
5.0.7.4 Demonstrate procedures for disposal of soiled materials		I	C	✓	✓
5.0.7.5 Provide care for patient using isolation technique		I	C	✓	✓

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Unit: 5. Infection Control and Risk Management *(continued)*			10	12	AD	LL	WS
Competency	**5.0.8**	**Maintain patient/client safety**		I	C	✓	✓
Builders:	5.0.8.1	Demonstrate proper procedure to apply restraints when necessary (e.g., soft, vest)		I	C	✓	✓
	5.0.8.2	Assist patient/client to walk with assistive ambulation devices		I	C	✓	✓
	5.0.8.3	Demonstrate safe usage of patient/client transport equipment		I	C	✓	✓
	5.0.8.4	Demonstrate safe handling of patient/client medical equipment (e.g., IV's, Catheters, oxygen tubing)		I	C	✓	✓
	5.0.8.5	Identify proper bed height		I	C	✓	✓
	5.0.8.6	Position patient/client maintaining proper body alignment, supporting body parts		I	C	✓	✓
	5.0.8.7	Demonstrate patient/client transfer techniques		I	C	✓	✓
	5.0.8.8	Identify safety needs of medicated patient/client		I	C	✓	✓
	5.0.8.9	Demonstrate usage of side rails		I	C	✓	✓
	5.0.8.10	Identify placement of patient/client call device		I	C	✓	✓
	5.0.8.11	Orient patient/client to surroundings		I	C	✓	✓

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Unit: 6. Medical Terminology			10	12	AD	LL	WS
Competency 6.0.1		**Use common medical symbols, abbreviations, and acronyms**		C	R		
Builders:	6.0.1.1	Spell medical terms correctly	I	C	R		
	6.0.1.2	Identify commonly used symbols (e.g., O_2)	I	C	R		
	6.0.1.3	Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)		C	R		
	6.0.1.4	Write out full names of commonly used abbreviations (e.g., bx = biopsy)		C	R		
	6.0.1.5	Demonstrate use of Roman numeral system	C	R	R		
Competency 6.0.2		**Demonstrate knowledge of medical terminology**		I	C		
Builders:	6.0.2.1	Define basic Greek and Latin prefixes and suffixes		I	C		
	6.0.2.2	Spell basic Greek and Latin prefixes and suffixes		I	C		
	6.0.2.3	Pronounce basic Greek and Latin prefixes and suffixes		I	C		
	6.0.2.4	Build medical words from Greek and Latin elements		I	C		
	6.0.2.5	Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)		I	C		
	6.0.2.6	Define terms related to the integumentary system	I	R	C		
	6.0.2.7	Define terms related to the skeletal system	I	R	C		
	6.0.2.8	Define terms related to the muscular system	I	R	C		
	6.0.2.9	Define terms related to the nervous system	I	R	C		
	6.0.2.10	Define terms related to the circulatory/cardiovascular system	I	R	C		
	6.0.2.11	Define terms related to the lymphatic system	I	R	C		
	6.0.2.12	Define terms related to the respiratory system	I	R	C		
	6.0.2.13	Define terms related to the digestive system	I	R	C		
	6.0.2.14	Define terms related to the endocrine system	I	R	C		
	6.0.2.15	Define terms related to the urinary system	I	R	C		
	6.0.2.16	Define terms related to the reproductive system	I	R	C		
	6.0.2.17	Define terms related to the senses	I	R	C		
	6.0.2.18	Define terms related to immunology		I	C		
	6.0.2.19	Define terms related to pathology		I	C		

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Unit: 7. Anatomy, Physiology, and Pathology			10	12	AD	LL	WS
Competency	**7.0.1**	**Demonstrate general knowledge of basic chemistry**	I	I	C		
Builders:	7.0.1.1	Identify elements on periodic table	I	C	R		
	7.0.1.2	Design simple chemical formulas		C	R		
	7.0.1.3	Contrast atoms vs. molecules	I	C	R		
	7.0.1.4	Define synthesis, decomposition, and exchange reactions		I	C		
	7.0.1.5	Define diffusion, filtration, and osmosis	I	C	R		
	7.0.1.6	Differentiate between acids and bases and implications to the body		I	C		
Competency	**7.0.2**	**Demonstrate general knowledge of the human body**	I	C	R		
Builders:	7.0.2.1	Define anatomy and physiology and explain their relationship	I	C	R		
	7.0.2.2	Describe the anatomical position	I	C	R		
	7.0.2.3	Identify body directions, planes, and cavities	I	C	R		
	7.0.2.4	Name the major organ systems and their functions	I	C	R		
	7.0.2.5	Classify major organs by the organ system they are within	I	C	R		
	7.0.2.6	Define cell composition, shape and size	I	C	R		
	7.0.2.7	Identify cell regions and organelles and explain their function	I	C	R		
	7.0.2.8	Identify basic life processes of cell division and transportation	I	C	R		
	7.0.2.9	Identify the four major tissue types, their function and subtypes	I	C	R		
	7.0.2.10	Define neoplasm and distinguish between benign and malignant	I	C	R		
	7.0.2.11	Describe effect of aging across the lifespan	I	C	R		

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Unit: 7. Anatomy, Physiology, and Pathology *(continued)*		10	12	AD	LL	WS
Competency 7.0.3	**Demonstrate knowledge of the integumentary system**	I	I	C		
Builders: 7.0.3.1	List the functions of the integumentary system	I	C	R		
7.0.3.2	Describe skin's response to touch/pressure, temperature, and pain	I	C	R		
7.0.3.3	Name the layers of the skin	I	C	R		
7.0.3.4	Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland		C	R		
7.0.3.5	Name the major body membranes		I	C		
7.0.3.6	Identify common skin disorders		I	C		
7.0.3.7	Describe common types of skin lesions		I	C		
7.0.3.8	Identify cultural skin differences		I	C		
Competency 7.0.4	**Demonstrate knowledge of the skeletal system**		I	C		
Builders: 7.0.4.1	Identify major bones of the human skeleton	I	R	C		
7.0.4.2	List functions of the skeletal system	I	R	C		
7.0.4.3	Name methods of classifying bone		C	R		
7.0.4.4	Identify bone types within each classification method		I	C		
7.0.4.5	Explain the structure and function of a long bone		I	C		
7.0.4.6	Describe the composition of bone		I	C		
7.0.4.7	Define function and dysfunction of bone marrow		I	C		
7.0.4.8	Explain the process of bone formation and growth		I	C		
7.0.4.9	Name types of bone markings and their associated terms		I	C		
7.0.4.10	Define joint and describe the typical structure of a joint		I	C		
7.0.4.11	Name categories of joints		I	C		
7.0.4.12	Compare the amount of movement allowed by each type of joint		I	C		
7.0.4.13	Define types of motion		I	C		
7.0.4.14	Identify various types of fractures		I	C		
7.0.4.15	Describe common disorders and injuries of bones and joints		I	C		

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Unit: 7. Anatomy, Physiology, and Pathology (continued)	10	12	AD	LL	WS
Competency 7.0.5 Demonstrate knowledge of the muscular system	**I**	**R**	**C**		
Builders: 7.0.5.1 Identify types of muscle tissue	I	R	C		
7.0.5.2 Describe muscle contraction	I	R	C		
7.0.5.3 Define the parts of a muscle and explain major muscle types		I	C		
7.0.5.4 Define muscle tone, isotonic and isometric contractions		I	C		
7.0.5.5 Name types of movements produced by skeletal muscle contractions		I	C		
7.0.5.6 Identify the major muscles of the human body	I	R	C		
7.0.5.7 Identify common abnormal conditions of the muscles		I	C		
7.0.5.8 Identify origin, insertion and function of major muscles		I	C		
7.0.5.9 Describe common disorders and injuries of the muscles		I	C		
Competency 7.0.6 Demonstrate knowledge of the nervous system	**I**	**R**	**C**		
Builders: 7.0.6.1 Describe the general functions of the nervous system	I	R	C		
7.0.6.2 Identify the main parts of the nervous system	I	R	C		
7.0.6.3 Name principal cell types that compose the nervous system		I	C		
7.0.6.4 Describe the neuron, its function, and the existing types of neurons		I	C		
7.0.6.5 Describe the neuralgia, its function, and the existing types of neuralgia		I	C		
7.0.6.6 Define ganglia, nuclei, tracts and nerves, noting their differences		I	C		
7.0.6.7 Describe the events of the nerve impulse		I	C		
7.0.6.8 Identify parts of the brain	I	R	C		
7.0.6.9 Describe structures and functions of the various parts of the brain and spinal cord	I	R	C		
7.0.6.10 Explain function of the autonomic nervous system and its divisions		I	C		
7.0.6.11 Describe common disorders and injuries of the nervous system		I	C		

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Unit: 7. Anatomy, Physiology, and Pathology (continued)	10	12	AD	LL	WS
Competency 7.0.7 **Demonstrate knowledge of the circulatory/cardiovascular system**	I	R	C		
Builders: 7.0.7.1 Identify the structures and functions of the heart	I	R	C		
7.0.7.2 Trace the pathway of blood through the heart	I	R	C		
7.0.7.3 Describe routes of blood circulation	I	R	C		
7.0.7.4 Define blood pressure, pulse, systole, diastole and cardiac cycle		I	C		
7.0.7.5 Describe the pathway of impulses through the heart's conduction system		I	C		
7.0.7.6 List factors that influence heart rate	I	R	C		
7.0.7.7 Identify the structure and function of the blood vessels - arteries, veins and capillaries	I	R	C		
7.0.7.8 Identify major blood vessels	I	R	C		
7.0.7.9 Identify structures involved in fetal circulation		I	C		
7.0.7.10 Identify pulse points	I	C	R		
7.0.7.11 Identify major components of blood	I	R	C		
7.0.7.12 Identify the blood types	I	C	R		
7.0.7.13 Describe the blood clotting process	I	R	C		
7.0.7.14 Describe common disorders of the circulatory/cardiovascular system	I	R	C		
Competency 7.0.8 **Demonstrate knowledge of the lymphatic system**	I	R	C		
Builders: 7.0.8.1 Name the structures composing the lymphatic system	I	R	C		
7.0.8.2 Identify the functions of the lymphatic system	I	R	C		
7.0.8.3 Explain the relationship between the lymphatic system and the cardiovascular system	I	R	C		
7.0.8.4 Explain the immune response in relationship to the lymphocytes		I	C		
7.0.8.5 Define antigens		I	C		
7.0.8.6 Define antibodies and ways in which antibodies act against antigens		I	C		
7.0.8.7 Distinguish between active and passive immunity		I	C		
7.0.8.8 Describe common disorders of the lymphatic system		I	C		

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Unit: 7. Anatomy, Physiology, and Pathology (continued)	10	12	AD	LL	WS
Competency 7.0.9 **Demonstrate knowledge of the respiratory system**	I	R	C		
Builders: 7.0.9.1 Identify structures of respiratory system	I	R	C		
7.0.9.2 Describe the function of major respiratory system organs and structures	I	R	C		
7.0.9.3 Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration		I	C		
7.0.9.4 Describe the process of gas exchange in the lungs and the tissues	I	R	C		
7.0.9.5 Explain the role of the respiratory muscles in breathing	I	R	C		
7.0.9.6 Identify brain areas involved in the control of respiration		I	C		
7.0.9.7 Explain respiratory volumes and capacities		I	C		
7.0.9.8 Describe common disorders and injuries of the respiratory system	I	R	C		
Competency 7.0.10 **Demonstrate knowledge of the digestive system**	I	R	C		
Builders: 7.0.10.1 Identify the structures and functions of the digestive system	I	R	C		
7.0.10.2 Describe the mechanisms of mastication, swallowing, vomiting and defecation	I	R	C		
7.0.10.3 Define anabolism and catabolism		I	C		
7.0.10.4 Define basal metabolic rate and total metabolic rate		I	C		
7.0.10.5 Describe common disorders of the digestive system	I	R	C		
Competency 7.0.11 **Demonstrate knowledge of the endocrine system**	I	R	C		
Builders: 7.0.11.1 Differentiate between endocrine and exocrine glands	I	R	C		
7.0.11.2 Identify major endocrine glands and hormones produced by each	I	R	C		
7.0.11.3 Explain response of body systems to hormones	I	R	C		
7.0.11.4 Describe common endocrine gland disorders		I	C		

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Unit: 7. Anatomy, Physiology, and Pathology *(continued)*	**10**	**12**	**AD**	**LL**	**WS**
Competency 7.0.12 **Demonstrate knowledge of the urinary system**	**I**	**R**	**C**		
Builders: 7.0.12.1 Identify components of the urinary system	I	R	C		
7.0.12.2 Explain the functioning of the urinary system	I	R	C		
7.0.12.3 Identify nitrogenous waste found in the urine		I	C		
7.0.12.4 Explain how water and electrolyte balance is maintained by the body	I	R	C		
7.0.12.5 Define micturition		I	C		
7.0.12.6 Explain how micturition occurs		I	C		
7.0.12.7 Describe common disorders of the urinary system		I	C		
Competency 7.0.13 **Demonstrate knowledge of the reproductive system**	**I**	**R**	**C**		
Builders: 7.0.13.1 Explain the general function of the reproductive system	I	R	C		
7.0.13.2 Identify major organs of the reproductive system	I	R	C		
7.0.13.3 Describe the phases of the menstrual cycle	I	R	C		
7.0.13.4 Explain the process of meiosis, spermatogenesis, and oogenesis		I	C		
7.0.13.5 Identify stages of embryonic development		I	C		
7.0.13.6 Explain the physiology of childbirth		I	C		
7.0.13.7 Describe common disorders of the reproductive system	I	R	C		
Competency 7.0.14 **Demonstrate knowledge of the senses**	**I**	**R**	**C**		
Builders: 7.0.14.1 Identify major structures and functions of vision, hearing, balance, smell, taste, and touch	I	R	C		
7.0.14.2 Define refraction, accommodation, real image, and emmetropic		I	C		
7.0.14.3 Describe common disorders and injuries of the senses	I	R	C		

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Unit: 7. Anatomy, Physiology, and Pathology *(continued)*			10	12	AD	LL	WS
Competency	**7.0.15**	**Demonstrate knowledge of immunology**	I	R	C		
Builders:	7.0.15.1	Explain the immune response in relationship to the lymphocytes		I	C		
	7.0.15.2	Define antigens and antibodies	I	R	C		
	7.0.15.3	Explain the differences among the five major classes of antibodies		I	C		
	7.0.15.4	Describe the relationship between antigens and antibodies		I	C		
	7.0.15.5	Distinguish between active and passive immunity	I	R	C		
	7.0.15.6	Describe common immunodeficiencies, allergies, and autoimmune disorders	I	R	C		

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Unit: 8. Medical Law and Ethics		10	12	AD	LL	WS
Competency 8.0.1	**Comply with medical law and ethics**		**I**	C	√	√
Builders: 8.0.1.1	Differentiate between legal and ethical behavior		I	C	√	√
8.0.1.2	Explain terms, principles, and characteristics of legal and ethical behavior		I	C	√	√
8.0.1.3	Explain state and federal rules and regulations governing health care professions		I	C	√	√
8.0.1.4	Explain legal ramifications of breaching rules, regulations, and patient confidentiality		I	C	√	√
8.0.1.5	Explain effects of unethical and/or unlawful behavior of health care professionals		I	C	√	√
8.0.1.6	Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice		I	C	√	√
8.0.1.7	Identify professional limits and seek assistance as needed		I	C	√	√
8.0.1.8	State established policy in initiating or terminating medical treatment		I	C	√	√
8.0.1.9	State the Good Samaritan Act	I	R	C	√	√
Competency 8.0.2	**Exhibit ethical behavior**		**I**	C	√	√
Builders: 8.0.2.1	Describe ethical dilemma(s) in health care (e.g., death and dying; medical ethics committees)		I	C	√	√
8.0.2.2	Explain health care professional's responsibility in situations of patient abuse and neglect		I	C	√	√
8.0.2.3	Explain health care professional's responsibility in situations of coworker chemical addiction		I	C	√	√
8.0.2.4	Identify personal, societal, and global implications of substance use and abuse	I	R	C	√	√
8.0.2.5	Explain consequences of unethical behavior of health care professionals		I	C	√	√

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***Unit: 8. Medical Law and Ethics** (continued)*	10	12	AD	LL	WS
Competency 8.0.3 Practice discretion regarding patient information		I	C	√	√
Builders: 8.0.3.1 Identify components of Patient Bill of Rights		I	C	√	√
8.0.3.2 Communicate patient's rights		I	C	√	√
8.0.3.3 Identify patient's rights and responsibilities		I	C	√	√
8.0.3.4 Describe specific reasons for sharing patient information with other health professionals		I	C	√	√
8.0.3.5 Identify appropriate persons to whom information can be released		I	C	√	√
8.0.3.6 Describe methods of maintaining confidentiality		I	C	√	√
8.0.3.7 Explain anatomical gift act	I	R	C	√	√
8.0.3.8 Explain advance directives		I	C	√	√
8.0.3.9 Explain living will		I	C	√	√
8.0.3.10 Explain informed consent		I	C	√	√
8.0.3.11 Identify reasons for termination of patient services (e.g., patient refusal)		I	C	√	√
8.0.3.12 Explain consequences of noncompliance with physician's recommendations		I	C	√	√
8.0.3.13 Describe the importance of proper sample identification		I	C	√	√
Competency 8.0.4 Practice personal professional protocol with medical community		I	C	√	√
Builders: 8.0.4.1 Explain process of certification/licensure of health professionals*		I	C	√	√
8.0.4.2 Explain importance of certification/licensure of health professionals*		I	C	√	√
8.0.4.3 Maintain integrity of personal files		I	C	√	√
8.0.4.4 Explain the statute of limitation for medical records		I	C	√	√
8.0.4.5 Identify ownership of medical records		I	C	√	√
8.0.4.6 Maintain procedures for legal access to patient and/or records		I	C	√	√
8.0.4.7 Investigate professional liability coverage options		I	C	√	√
*Guidance Issue					

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Unit: 9. Vital Signs		10	12	AD	LL	WS
Competency 9.0.1	**Interview patient**		C	R	√	
Builders: 9.0.1.1	Complete patient information sheets		C	R	√	
9.0.1.2	Obtain medical history (e.g., allergies, current medications)		C	R	√	
9.0.1.3	Validate data with patient or patient's family member(s)		C	R	√	
Competency 9.0.2	**Measure temperature**		C	R	√	
Builders: 9.0.2.1	Follow safety and aseptic precautions for taking temperature		C	R	√	
9.0.2.2	Identify normal range and average temperature of oral, axillary, tympanic, and rectal methods of measuring body temperature		C	R	√	
9.0.2.3	Identify factors that may affect temperature		C	R	√	
9.0.2.4	Select route for measuring temperature		C	R	√	
9.0.2.5	Demonstrate use of different types of thermometers		C	R	√	
9.0.2.6	Record temperature measurements		C	R	√	
9.0.2.7	Report abnormal temperature measurements		C	R	√	
9.0.2.8	Maintain thermometer(s)		C	R	√	
Competency 9.0.3	**Measure pulse**		C	R	√	
Builders: 9.0.3.1	Identify criteria for selecting pulse site (e.g., femoral, apical, radial)		C	R	√	
9.0.3.2	Identify normal pulse range for different age groups		C	R	√	
9.0.3.3	Identify factors that may affect pulse		C	R	√	
9.0.3.4	Identify variations from normal pulse that should be reported		C	R	√	
9.0.3.5	Record pulse		C	R	√	

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Unit:* 9. *Vital Signs *(continued)*			10	12	AD	LL	WS
Competency	**9.0.4**	**Measure respiration**		I	C	√	
Builders:	9.0.4.1	Assess presence of lung sounds		I	C	√	
	9.0.4.2	Measure rate, depth, and rhythm of respiration		C	R	√	
	9.0.4.3	Identify normal respiratory rate for different age groups		C	R	√	
	9.0.4.4	Report signs of compromised respiration		C	R	√	
	9.0.4.5	Identify factors that may affect respiration		C	R	√	
	9.0.4.6	Record respiration		C	R	√	
Competency	**9.0.5**	**Measure blood pressure**		C	R	√	
Builders:	9.0.5.1	Identify etiology of hypertension		C	R	√	
	9.0.5.2	Identify consequences of untreated hypertension		C	R	√	
	9.0.5.3	Identify normal range of blood pressure for different age groups		C	R	√	
	9.0.5.4	Record blood pressure		C	R	√	
	9.0.5.5	Identify factors that affect blood pressure		C	R	√	
	9.0.5.6	Select appropriate cuff size		C	R	√	
	9.0.5.7	Describe the effect of inappropriate cuff size on accurate blood pressure reading		C	R	√	
	9.0.5.8	Identify variations from normal blood pressure that should be reported		C	R	√	
	9.0.5.9	Demonstrate use of aneroid sphygmomanometer		C	R	√	
	9.0.5.10	Demonstrate use of mercurial sphygmomanometer		C	R	√	
	9.0.5.11	Demonstrate palpated blood pressure		C	R	√	

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Unit: 9. Vital Signs (continued)	10	12	AD	LL	WS
Competency 9.0.6 Obtain physical measurements		C	R	√	
Builders: 9.0.6.1 Measure adult height		C	R	√	
9.0.6.2 Measure adult weight		C	R	√	
9.0.6.3 Measure infant height		C	R	√	
9.0.6.4 Measure infant weight		C	R	√	
9.0.6.5 Measure infant head and chest circumference		C	R	√	
9.0.6.6 Measure auditory status (e.g., tympanogram)		C	R	√	
9.0.6.7 Measure visual status (e.g., eye chart)		C	R	√	
9.0.6.8 Identify color blindness		C	R	√	
9.0.6.9 Record all results		C	R	√	

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Unit: *10. First Aid and Medical Emergencies*	10	12	AD	LL	WS
Competency 10.0.1 **Identify emergency procedures**	I	C	R	✓	✓
Builders: 10.0.1.1 Identify emergency procedures	I	C	R	✓	✓
10.0.1.2 Contact local emergency assistance	I	C	R	✓	✓
10.0.1.3 Demonstrate first responder procedures	I	C	R	✓	✓
Competency 10.0.2 **Acquire first aid certification****	I	C	R	✓	
Builders: 10.0.2.1 Assist with first aid for wounds or fractures	I	C	R	✓	
10.0.2.2 Administer first aid to control bleeding	I	C	R	✓	
10.0.2.3 Administer first aid for shock	I	C	R	✓	
10.0.2.4 Administer first aid for burn patient	I	C	R	✓	
10.0.2.5 Assist with first aid for poisoned patient	I	C	R	✓	
10.0.2.6 Assist with patient having seizure	I	C	R	✓	
10.0.2.7 Assist with syncopal patient	I	C	R	✓	
Competency 10.0.3 **Acquire cardiopulmonary resuscitation (CPR) certification at the Health Care Provider level**	I	C	R	✓	✓
Builders: 10.0.3.1 Administer CPR to infants and children	I	C	R	✓	✓
10.0.3.2 Administer CPR to adults	I	C	R	✓	✓
10.0.3.3 Administer care for obstructed airways for infants, children, and adults	I	C	R	✓	✓
**Appropriate to specific occupational areas.					

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Unit: 11. Patient Education	10	12	AD	LL	WS
Competency 11.0.1 **Inform patient/family about diagnostic procedures**		I	C	√	
Builders: 11.0.1.1 Distribute literature regarding advised procedure		I	C	√	
11.0.1.2 Explain procedures		I	C	√	
11.0.1.3 Explain preparation for diagnostic procedures		I	C	√	
11.0.1.4 Translate medical terminology into lay terms		I	C	√	
11.0.1.5 Schedule patient follow-up		I	C	√	
11.0.1.6 Obtain informed consent signature		I	C	√	
Competency 11.0.2 **Provide psycho-social care for patient/family****		I	C	√	
Builders: 11.0.2.1 Arrange emotional support for patient and family member(s)		I	C	√	
11.0.2.2 Report abuse and/or neglect		I	C	√	
11.0.2.3 Respond to emotional needs of patient and family member(s)		I	C	√	
11.0.2.4 Apply reality orientation technique		I	C	√	
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Unit: 12. Nutrition		**10**	**12**	**AD**	**LL**	**WS**
Competency 12.0.1	**Identify fundamentals of nutrition**	I	C		√	
Builders: 12.0.1.1	Identify nutrients and food groups	I	C		√	
12.0.1.2	Explain role of nutrients to normal body functions	I	C		√	
12.0.1.3	Identify components of a balanced diet across the life span (e.g., USDA Food pyramid)	I	C		√	
Competency 12.0.2	**Identify nutritional needs related to special conditions and/or diseases****		I	C	√	√
Builders: 12.0.2.1	Describe common diets related to alterations in health (e.g., pureed, mechanical-soft)		I	C	√	√
12.0.2.2	Describe special diets		I	C	√	√
12.0.2.3	Identify risks of non-compliance with dietary restrictions		I	C	√	√
Competency 12.0.3	**Identify facets of alternative nutrition****		I	C		√
Builders: 12.0.3.1	Identify indications and effects of tube feedings		I	C		√
12.0.3.2	Identify indications and effects of intravenous fluids		I	C		√
12.0.3.3	Identify indications and effects of lipids			C		√
12.0.3.4	Identify indications and effects of hyperal			C		√
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Unit: 13. Basic Pharmacology			10	12	AD	LL	WS
Competency 13.0.1		**Maintain supply of medications****		I	C	√	√
Builders:	13.0.1.1	Check inventory stock		I	C	√	√
	13.0.1.2	Contact supplier			C	√	√
	13.0.1.3	Rotate stock			C	√	√
	13.0.1.4	Process medication forms			C	√	√
	13.0.1.5	Store medications properly		I	C	√	√
	13.0.1.6	Prepare expired medications for disposal		I	C	√	√
	13.0.1.7	Dispose of medications properly (e.g., comply with government regulations)		I	C	√	√
Competency 13.0.2		**Calculate dosage according to physician's orders****		I	C	√	√
Builders:	13.0.2.1	Explain the need to verify the accuracy of medical orders		I	C	√	√
	13.0.2.2	Use Physician's Desk Reference (PDR) for fact-finding		I	C	√	√
	13.0.2.3	Transcribe medication order			C	√	√
	13.0.2.4	Calculate oral dosage		I	C	√	√
	13.0.2.5	Calculate parenteral dosage			C	√	√
	13.0.2.6	Calculate pediatric dosage			C	√	√
	13.0.2.7	Calculate intravenous dosage and rate of flow			C	√	√
Competency 13.0.3		**Instruct patients on use of medications****		I	C	√	√
Builders:	13.0.3.1	Provide instructions for medications		I	C	√	√
	13.0.3.2	Explain use of medications (e.g., identify side effects, adverse effects, interactions)			C	√	√
	13.0.3.3	Maintain standing orders according to physician's protocol (e.g., prescription refills)		I	C	√	√
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Unit: ***13. Basic Pharmacology*** *(continued)*	10	12	AD	LL	WS
Competency 13.0.4 **Administer medications according to physician's orders****		I	C	√	√
Builders: 13.0.4.1 Identify patient		C	R	√	√
13.0.4.2 Verify patient allergies		I	C	√	√
13.0.4.3 Use reference materials		I	C	√	√
13.0.4.4 Verify accuracy of medical orders			C	√	√
13.0.4.5 Identify correct anatomical sites			C	√	√
13.0.4.6 Prepare transdermal medications			C	√	√
13.0.4.7 Prepare inhalant medications			C	√	√
13.0.4.8 Prepare instillation medications			C	√	√
13.0.4.9 Assist with administration of local anesthesia		I	C	√	√
13.0.4.10 Administer medications			C	√	√
13.0.4.11 Document medication administration			C	√	√
13.0.4.12 Document patient response to medications			C	√	√
Competency 13.0.5 **Evaluate response to medication****		I	C	√	
Builders: 13.0.5.1 Identify possible adverse reactions to medication		I	C	√	
13.0.5.2 Assess patient/client reaction to medication		I	C	√	
13.0.5.3 Report adverse reactions to appropriate sources		I	C	√	
13.0.5.4 Document patient/client response to medication		I	C	√	
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Unit: 14. Specimen Collection and Handling	10	12	AD	LL	WS
Competency 14.0.1 **Demonstrate safe phlebotomy techniques**		I	C	√	
Builders: 14.0.1.1 Assemble equipment (e.g., vacutainers, bottles)		I	C	√	
14.0.1.2 Differentiate venous versus arterial collection procedures (e.g., Allen test)			C	√	
14.0.1.3 Prepare patient for procedure (e.g., establish rapport)		I	C	√	
14.0.1.4 Care for phlebotomy site		I	C	√	
14.0.1.5 Collect capillary blood*		I	C	√	
14.0.1.6 Collect venous blood with syringe*		I	C	√	
14.0.1.7 Collect venous blood with vacutainer*		I	C	√	
14.0.1.8 Collect blood culture*		I	C	√	
14.0.1.9 Handle specimen(s) properly		I	C	√	
14.0.1.10 Follow proper patient ID procedures		I	C	√	
14.0.1.11 List the order of draw using vacutainer and syringe techniques		I	C		
14.0.1.12 List additives found in color coded tubes		I	C		
14.0.1.13 List the common tests for which each color coded tube is used		I	C		
*Discretion of local Board of Education.					

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Unit: 14. Specimen Collection and Handling *(continued)*	**10**	**12**	**AD**	**LL**	**WS**
Competency 14.0.2 Perform specimen collection and handling		I	C	√	
Builders: 14.0.2.1 Collect throat specimens for culture		I	C	√	
14.0.2.2 Collect urine (e.g., clean-cath, sterile, 24-hour, midstream, catheter)		I	C	√	
14.0.2.3 Instruct patient on how to collect stool specimen			C	√	
14.0.2.4 Identify proper collection procedures for wound, eye, and nose specimens			C	√	
14.0.2.5 Identify proper collection procedure for sputum specimens			C	√	
14.0.2.6 Label all collected specimens properly		C	R	√	
14.0.2.7 Package specimen for mailing/shipping		I	C	√	
14.0.2.8 Transport specimen		I	C	√	
14.0.2.9 Differentiate among timed specimens, fasting specimens, and state specimens		I	C	√	
14.0.2.10 Describe general criteria for suitability of a specimen for analysis		I	C	√	
14.0.2.11 Describe conditions that must be met if specimens and tests are to be used as legal evidence		I	C	√	
14.0.2.12 Follow proper patient ID procedures		C	R	√	

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Unit: 15. Psychology of Stress	**10**	**12**	**AD**	**LL**	**WS**
Competency 15.0.1 **Analyze factors that influence a client's response to stress**	I	R	C	√	
Builders: 15.0.1.1 Explain stress as a concept	I	R	C	√	
15.0.1.2 Differentiate between stress and stressor	I	R	C	√	
15.0.1.3 Explain how an individual's perception of stress influences his response to stressors	I	R	C	√	
15.0.1.4 Explain how internal and external mitigating factors influence one's response to stress	I	R	C	√	
15.0.1.5 Identify coping mechanisms used to decrease stress	I	R	C	√	
15.0.1.6 Identify biological adaptive responses to stress	I	R	C	√	
Competency 15.0.2 **Analyze physiological response to stress**		I	C	√	
Builders: 15.0.2.1 Describe the stress response on the following systems: autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, hemopoietic system			C	√	
15.0.2.2 Explain how the internal and external nonspecific mitigating factors relate to the physiological stress response			C	√	
15.0.2.3 Differentiate between immune system's response to stressors in children and adults		I	C	√	
15.0.2.4 Explain how the concept of stress relates to activation of the disease process		I	C	√	

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*Unit: 15. **Psychology of Stress** (continued)*			10	12	AD	LL	WS
Competency 15.0.3		**Analyze psychological response to stress**		I	C	✓	
Builders:	15.0.3.1	Identify psychological stressors	I	R	C	✓	
	15.0.3.2	Describe the relationship between personality types and the stress response			C	✓	
	15.0.3.3	Summarize the primary and secondary appraisal of a stressor			C	✓	
	15.0.3.4	Differentiate between cognitive and behavioral coping mechanisms			C	✓	
	15.0.3.5	Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to a stressor			C	✓	
	15.0.3.6	Identify a patient/resident/client's ability to cope with stress based on individual and stressor characteristics			C	✓	
	15.0.3.7	Identify types of coping strategies		I	C	✓	
	15.0.3.8	Identify selected defense mechanisms		I	C	✓	
	15.0.3.9	Summarize ineffective coping behaviors		I	C	✓	
	15.0.3.10	Explain the psychobiologic response of anxiety as it relates to stress			C	✓	
	15.0.3.11	Describe the disequilibrium associated with response to a stressor			C	✓	
Competency 15.0.4		**Provide care for a patient/resident/client with ineffective coping response****		I	C	✓	
Builders:	15.0.4.1	Assess psychological responses to stress in a patient/resident/client			C	✓	
	15.0.4.2	Promote exploration of feelings when providing care		I	C	✓	
	15.0.4.3	Describe strategies to assist in stress reduction		I	C	✓	
	15.0.4.4	Implement strategies to assist in stress reduction			C	✓	
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Unit: 16. Psychology of Human Relations	10	12	AD	LL	WS
Competency 16.0.1 **Explain human growth and development****		I	C	√	
Builders: 16.0.1.1 Describe characteristics of growth and development from conception to birth		I	C	√	
16.0.1.2 Describe characteristics of growth and development from birth through preschool	I	R	C	√	
16.0.1.3 Describe characteristics of growth and development from school age through adolescence	I	R	C	√	
16.0.1.4 Describe characteristics of growth and development of the adult through the life span		I	C	√	
Competency 16.0.2 **Demonstrate appropriate communication techniques**	I	C	R	√	
Builders: 16.0.2.1 Identify components of provider-client relationship		C	R	√	
16.0.2.2 Identify uniqueness of individual (e.g., cultural, generational, social, ethnic, religious)	I	C	R	√	
16.0.2.3 Treat clients with respect and dignity		C	R	√	
16.0.2.4 Identify assertive and aggressive responses	I	C	R	√	
16.0.2.5 Differentiate between acceptable and unacceptable touching	I	C	R	√	
16.0.2.6 Identify barriers to communication	I	C	R	√	
16.0.2.7 Communicate with various individuals effectively (e.g., physician, coworkers, etc.)		C	R	√	

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Unit: 16. Psychology of Human Relations (continued)			10	12	AD	LL	WS
Competency	**16.0.3**	**Establish rapport**		I	C	✓	
Builders:	16.0.3.1	Describe proper manner for greeting various individuals (e.g., physicians, etc.)	I	C	R	✓	
	16.0.3.2	Adapt communication to individual's ability to understand (e.g., functioning level, emotional state and educational level)		I	C	✓	
	16.0.3.3	Respond to verbal and nonverbal communication		I	C	✓	
	16.0.3.4	Serve as liaison between physician, patient/client, and others		I	C	✓	
	16.0.3.5	Solicit patient/client understanding of communication		I	C	✓	
	16.0.3.6	Translate medical terms into language patient/client can understand		I	C	✓	
	16.0.3.7	Describe individual, cultural and socioeconomic differences in people	I	C	R	✓	
	16.0.3.8	Identify methods in which to communicate with patients/clients or responsible party with sensory disorders		I	C	✓	
	16.0.3.9	Support patient/client and responsible party during the grief process		I	C	✓	
	16.0.3.10	Respond to patient/client/responsible party in a therapeutic manner		I	C	✓	
	16.0.3.11	Treat patients/clients with empathy, impartiality, and respect		C	R	✓	
	16.0.3.12	Support patient's/client's right to make decisions regarding care		C	R	✓	

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Unit: 16. Psychology of Human Relations (continued)	10	12	AD	LL	WS
Competency 16.0.4 **Follow established procedures for communication and documentation**		I	C		√
Builders: 16.0.4.1 Transmit reports of patient/client status			C		√
16.0.4.2 Complete interdepartmental requisitions (e.g., therapies, procedures, tests)			C		√
16.0.4.3 Maintain accuracy in all communications		I	C		√
16.0.4.4 Initiate medical records according to institutional policies			C		√
16.0.4.5 Maintain medical records according to institutional policies			C		√
16.0.4.6 Identify need for documenting and reporting		I	C		√
16.0.4.7 Interpret patient/client related documents			C		√
16.0.4.8 Participate in team conferences		I	C		√
16.0.4.9 Report change in patient/client status			C		√
16.0.4.10 Clarify physician's orders		I	C		√
16.0.4.11 Differentiate charting methods			C		√
16.0.4.12 Respond to request for service		I	C		√
16.0.4.13 Notify patient/client or responsible party of changes required in treatment plan			C		√
16.0.4.14 Witness a consent form			C		√
16.0.4.15 Create an informational display		I	C		√
Competency 16.0.5 **Document patient/client progress**		I	C	√	
Builders: 16.0.5.1 Record current treatment rendered and patient/client response			C	√	
16.0.5.2 Include parameters in notes (e.g., subjective, objective, assessment, plan)		I	C	√	
16.0.5.3 Use correct grammar, spelling, and approved abbreviations		I	C	√	
16.0.5.4 Secure appropriate signatures			C	√	
16.0.5.5 Write legibly		I	C	√	
16.0.5.6 Use appropriate resources		I	C	√	

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Unit: 17. General Administrative Support	10	12	AD	LL	WS
Competency 17.0.1 Perform scheduling and recordkeeping duties		I	I		✓
Builders: 17.0.1.1 Schedule patient/client appointments		I	R		✓
17.0.1.2 Coordinate activities with other departments			I		✓
17.0.1.3 Coordinate activities with community agencies		I	R		✓
17.0.1.4 Schedule space and equipment for therapy			I		✓
17.0.1.5 Maintain daily charges for equipment/treatment		I	R		✓
17.0.1.6 Comply with reimbursement requirements		I	R		✓
17.0.1.7 Maintain patient/client files/charts		I	R		✓
17.0.1.8 Maintain patient/client attendance records			I		✓
Competency 17.0.2 Perform other departmental duties			I		✓
Builders: 17.0.2.1 Assist in dealing with vendors			I		✓
17.0.2.2 Assist in maintenance of departmental budget			I		✓
17.0.2.3 Assist in writing/revising job description			I		✓
17.0.2.4 Assist in writing/revising forms (e.g., home programs, documentation forms)			I		✓
17.0.2.5 Maintain departmental cleanliness		C	R		✓
Competency 17.0.3 Manage reception area		I	R	✓	✓
Builders: 17.0.3.1 Prepare reception area		I	R	✓	✓
17.0.3.2 Greet visitors and patients		I	R	✓	✓
17.0.3.3 Advise patient of office hours		I	R	✓	✓
17.0.3.4 Manage children accompanying patient		I	R	✓	✓
17.0.3.5 Identify ways to communicate with patients with sensory disorders		I	R	✓	✓
17.0.3.6 Screen non-patient visitors		I	R	✓	✓
17.0.3.7 Explain delays to patients		I	R	✓	✓
17.0.3.8 Refer questions about billing and physician's fees to appropriate person or department		I	R	✓	✓

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Unit: 17.		***General Administrative Support*** *(continued)*	10	12	AD	LL	WS
Competency	**17.0.4**	**Demonstrate telephone handling techniques**	I	I	C	√	√
Builders:	17.0.4.1	Place calls	I	C	R	√	√
	17.0.4.2	Record telephone messages (e.g., date, time, initial calls)	I	C	R	√	√
	17.0.4.3	Accept telephone orders from physician		I	C	√	√
	17.0.4.4	Screen calls	I	C	R	√	√
	17.0.4.5	Transfer calls	I	C	R	√	√
	17.0.4.6	Obtain information for doctor to return calls		C	R	√	√
	17.0.4.7	Handle emergency calls		C	R	√	√
	17.0.4.8	Make arrangements for patient's admission to hospital**		C	R	√	√
	17.0.4.9	Make patient referrals according to physician's orders**		C	R	√	√
	17.0.4.10	Demonstrate proper telephone etiquette	I	C	R	√	√
Competency	**17.0.5**	**Maintain appointment schedules**		C	R		√
Builders:	17.0.5.1	Write appointments legibly		C	R		√
	17.0.5.2	Prepare appointment calendar		C	R		√
	17.0.5.3	Record appointments and cancellations		C	R		√
	17.0.5.4	Prepare appointment cards		C	R		√
	17.0.5.5	Maintain recall system		C	R		√
	17.0.5.6	Confirm appointments		C	R		√
	17.0.5.7	Schedule outpatient diagnostic tests that do not conflict with other tests		C	R		√
	17.0.5.8	Make referral appointments for patients		C	R		√
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Unit: 17. General Administrative Support (continued)	10	12	AD	LL	WS
Competency 17.0.6 Maintain medical records and laboratory reports**		I	R		√
Builders: 17.0.6.1 Obtain patient information		I	C		√
17.0.6.2 Prepare charge documentation		I	R		√
17.0.6.3 Explain importance of records management		C	R		√
17.0.6.4 File information alphabetically or numerically according to office protocol		C	R		√
17.0.6.5 Retrieve patient record from file		C	R		√
17.0.6.6 Prepare cross-reference file		I	R		√
17.0.6.7 Process incoming medical reports		I	C		√
17.0.6.8 Purge records		I	R		√
17.0.6.9 Prepare reports concerning patient care, condition, census, accidents, and incidents		I	C		√
17.0.6.10 Maintain current documentation of patient status and care		I	C		√
17.0.6.11 Complete immunization records		I	R		√
17.0.6.12 Compile patient laboratory reports		I	R		√
17.0.6.13 Process completed laboratory reports		I	R		√
17.0.6.14 Document results from reference laboratories		I	R		√
17.0.6.15 Verify tests ordered and tests received		I	C		√
Competency 17.0.7 Use office equipment		C	R		√
Builders: 17.0.7.1 Operate calculator	I	C	R		√
17.0.7.2 Operate keyboard	C		R		√
17.0.7.3 Operate copy machine	I	C	R		√
17.0.7.4 Operate fax machine		C	R		√
17.0.7.5 Operate multi-line telephone system		C	R		√
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Unit: 18. Computer Literacy			**10**	**12**	**AD**	**LL**	**WS**
Competency	**18.0.1**	**Describe personal computer operations**	**I**	C	**R**	√	
Builders:	18.0.1.1	Explain how data is stored in main computer memory	I	C	R	√	
	18.0.1.2	Explain how computer system executes program instruction	I	C	R	√	
	18.0.1.3	Explain electronic storage capacity	I	C	R	√	
	18.0.1.4	Differentiate data storage techniques	I	C	R	√	
	18.0.1.5	Identify types of memory	I	C	R	√	
Competency	**18.0.2**	**Describe interface devices and software techniques**		C	**R**	√	√
Builders:	18.0.2.1	Identify elements of user interface		C	R	√	√
	18.0.2.2	Identify hardware components and their advantages and disadvantages	I	C	R	√	√
	18.0.2.3	Explain networking		C	R	√	√
Competency	**18.0.3**	**Operate computer hardware**	**I**	C	**R**	√	
Builders:	18.0.3.1	Practice proper media handling techniques	I	C	R	√	
	18.0.3.2	Identify hardware and its use	I	C	R	√	
	18.0.3.3	Explain set-up	I	C	R	√	
	18.0.3.4	Operate hardware (e.g., mouse, diskettes, drive, modems, touch screen, printers, digitizers, scanners)	C	R	R	√	
	18.0.3.5	Demonstrate system commands	I	C	R	√	
	18.0.3.6	Keyboard efficiently	C	R	R	√	
	18.0.3.7	Demonstrate basic care of hardware	I	C	R	√	

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***Unit: 18. Computer Literacy** (continued)*	**10**	**12**	**AD**	**LL**	**WS**
Competency 18.0.4 Use software	**I**	**I**	**R**	**√**	**√**
Builders: 18.0.4.1 Define software types and functions	I	C	R	√	√
18.0.4.2 Describe basic disk operations and care	I	C	R	√	√
18.0.4.3 Perform functions necessary to operate software	C	R	R	√	√
18.0.4.4 List engineering applications of software package	I	C	R	√	√
18.0.4.5 List advantages and disadvantages of integrated and dedicated software	I	C	R	√	√
18.0.4.6 Demonstrate basic word processing skills	C	R	R	√	√
18.0.4.7 Demonstrate basic use of spreadsheets		I	R	√	√
18.0.4.8 Demonstrate basic use of databases		I	R	√	√

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Unit: 19. Teamwork	10	12	AD	LL	WS
Competency 19.0.1 **Demonstrate knowledge of teamwork**	I	C	R	√	
Builders: 19.0.1.1 Define employee empowerment	I	C	R	√	
19.0.1.2 Differentiate work groups and teams		C	R	√	
19.0.1.3 Identify conditions essential to teamwork	I	C	R	√	
19.0.1.4 Explain influence of company culture on teamwork		C	R	√	
19.0.1.5 Identify appropriate situations for using teams	I	C	R	√	
19.0.1.6 Define team structures (e.g., cross functional, quality improvement, task force, quality circles)	I	C	R	√	
19.0.1.7 Identify team building concepts	I	C	R	√	
19.0.1.8 Describe characteristics and dynamics of teams	I	C	R	√	
19.0.1.9 Identify characteristics of effective team leaders and members	I	C	R	√	
19.0.1.10 Identify responsibilities of a valuable team member	I	C	R	√	
19.0.1.11 Identify methods of involving each member of a team	I	C	R	√	
19.0.1.12 Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)		C	R	√	
19.0.1.13 Explain the purpose of facilitators	I	C	R	√	
19.0.1.14 Define consensus	I	C	R	√	
Competency 19.0.2 **Demonstrate teamwork**	I	C	R	√	
Builders: 19.0.2.1 Identify purpose of team and intended goal (include time frames)	I	C	R	√	
19.0.2.2 Structure team around purpose	I	C	R	√	
19.0.2.3 Define responsibilities of team members	I	C	R	√	
19.0.2.4 Contribute to efficiency and success of team	I	C	R	√	
19.0.2.5 Work toward individual and team milestones	I	C	R	√	
19.0.2.6 Analyze results of team project	I	C	R	√	
19.0.2.7 Facilitate a team meeting	I	C	R	√	
19.0.2.8 Assist team member(s) with problem	I	C	R	√	
19.0.2.9 Monitor time frame	I	C	R	√	

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Unit: 19. ***Teamwork*** *(continued)*	10	12	AD	LL	WS
Competency 19.0.3 **Use teamwork to solve problems**	I	C	R	√	
Builders: 19.0.3.1 Identify appropriate situations for using teams	I	C	R	√	
19.0.3.2 Use problem-solving process in a team setting	I	C	R	√	
19.0.3.3 Identify quality management processes/techniques		C	R	√	
19.0.3.4 Identify quality assurance processes/techniques		C	R	√	
19.0.3.5 Prepare presentation	I	C	R	√	
Competency 19.0.4 **Conduct team meetings**	I	C	R	√	
Builders: 19.0.4.1 Plan agenda	I	C	R	√	
19.0.4.2 Schedule meeting and location	I	C	R	√	
19.0.4.3 Invite appropriate personnel	I	C	R	√	
19.0.4.4 Solicit outside speakers as needed	I	C	R	√	
19.0.4.5 Assign someone to take minutes	I	C	R	√	
19.0.4.6 Make introductions	I	C	R	√	
19.0.4.7 Invite questions and comments and group participation	I	C	R	√	
19.0.4.8 Focus on agenda items	I	C	R	√	
19.0.4.9 Assign appropriate action, time frame and accountability to tasks	I	C	R	√	
19.0.4.10 Monitor time	I	C	R	√	
19.0.4.11 Close meeting on time	I	C	R	√	
19.0.4.12 Publish minutes in timely manner	I	C	R	√	

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Unit: 20. Employability Skills			10	12	AD	LL	WS
Competency	**20.0.1**	**Develop a flexible career plan**	I	C	R	✓	
Builders:	20.0.1.1	Identify current interests and aptitudes	I	C	R	✓	
	20.0.1.2	Identify common barriers to employment	I	C	R	✓	
	20.0.1.3	Describe strategies to overcome employment barriers	I	C	R	✓	
	20.0.1.4	Locate resources for finding employment	I	C	R	✓	
	20.0.1.5	Research job trends	I	C	R	✓	
	20.0.1.6	Identify career options	I	C	R	✓	
	20.0.1.7	Identify advantages and disadvantages of career options	I	C	R	✓	
	20.0.1.8	Identify job requirements	I	C	R	✓	
	20.0.1.9	Investigate education/training opportunities	I	C	R	✓	

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Unit: 20. Employability Skills (continued)			10	12	AD	LL	WS
Competency 20.0.2		**Seek employment**	**I**	**C**	**R**	**√**	
Builders:	20.0.2.1	Identify traditional and non-traditional employment sources	I	C	R	√	
	20.0.2.2	Identify present and future employment opportunities	I	C	R	√	
	20.0.2.3	Research job opportunities, including non-traditional careers	I	C	R	√	
	20.0.2.4	Compare salary ranges and benefit packages costs	I	C	R	√	
	20.0.2.5	Compile an occupational profile	I	C	R	√	
	20.0.2.6	Identify rights and responsibilities of equal employment opportunity laws	I	C	R	√	
	20.0.2.7	Design resume and cover letter	I	C	R	√	
	20.0.2.8	Secure references	I	C	R	√	
	20.0.2.9	Describe generic and specific employment tests (e.g., civil service exam; drug screening)	I	C	R	√	
	20.0.2.10	Use follow-up techniques to enhance employment potential	I	C	R	√	
	20.0.2.11	Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording	I	C	R	√	
	20.0.2.12	Describe methods for handling illegal questions on job application forms and during interviews	I	C	R	√	
	20.0.2.13	Write a letter of application	I	C	R	√	
	20.0.2.14	Research prospective employer	I	C	R	√	
	20.0.2.15	Explain critical importance of personal appearance, hygiene, and demeanor	I	C	R	√	
	20.0.2.16	Interpret job description	I	C	R	√	
	20.0.2.17	Demonstrate appropriate interview question and answer techniques	I	C	R	√	
	20.0.2.18	Demonstrate methods for handling difficult interview questions	I	C	R	√	
	20.0.2.19	Evaluate job offers	I	C	R	√	
	20.0.2.20	Write letter of acceptance	I	C	R	√	
	20.0.2.21	Write letter of declination	I	C	R	√	

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Unit: 20. Employability Skills *(continued)*			10	12	AD	LL	WS
Competency	**20.0.3**	**Build positive self-esteem**	I	C	R	✓	
Builders:	20.0.3.1	Identify factors that affect self-esteem	I	C	R	✓	
	20.0.3.2	Compare effects of low self-esteem and high self-esteem	I	C	R	✓	
	20.0.3.3	Identify strategies to promote positive self-esteem	I	C	R	✓	
Competency	**20.0.4**	**Prepare personal budget**	I	I		✓	
Builders:	20.0.4.1	Describe need for personal management records	I	C		✓	
	20.0.4.2	Balance checkbook	I	C		✓	
	20.0.4.3	Identify tax obligations	I	C		✓	
	20.0.4.4	Explain how credit affects financial security		C		✓	
	20.0.4.5	Compare types and method of investments		I		✓	
	20.0.4.6	Compare types and methods of borrowing		I		✓	
	20.0.4.7	Compare types and methods of insurance		I		✓	
	20.0.4.8	Compare types of retirement options/plans		I		✓	
	20.0.4.9	Identify discriminatory vs. non-discriminatory expenditures		I		✓	

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Unit: 20. Employability Skills (continued)			10	12	AD	LL	WS
Competency	**20.0.5**	**Demonstrate job retention skills**	**I**	**C**	**R**	**√**	
Builders:	20.0.5.1	Interpret job description	I	C	R	√	
	20.0.5.2	Evaluate employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene		C	R	√	
	20.0.5.3	Follow company policies and procedures		C	R	√	
	20.0.5.4	Exhibit appropriate work habits and attitude		C	R	√	
	20.0.5.5	Demonstrate ability to set priorities		C	R	√	
	20.0.5.6	Identify behaviors to establish successful working relationships		C	R	√	
	20.0.5.7	Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age		C	R	√	
	20.0.5.8	Identify opportunities for advancement and reasons for termination	I	C	R	√	
	20.0.5.9	List consequences of being absent frequently from job	I	C	R	√	
	20.0.5.10	List consequences of frequently arriving late for work	I	C	R	√	
	20.0.5.11	Demonstrate interpersonal relations skills	I	C	R	√	
	20.0.5.12	Demonstrate negotiation skills	I	C	R	√	
	20.0.5.13	Demonstrate teamwork	I	C	R	√	
	20.0.5.14	Follow chain-of-command	I	C	R	√	
	20.0.5.15	Prepare for job set-backs		C	R	√	
Competency	**20.0.6**	**Demonstrate knowledge of work ethic**	**I**	**C**	**R**	**√**	
Builders:	20.0.6.1	Define work ethic	I	C	R	√	
	20.0.6.2	Identify factors that influence work ethic	I	C	R	√	
	20.0.6.3	Describe how personal values are reflected in work ethic	I	C	R	√	
	20.0.6.4	Describe how interactions in the workplace affect personal work ethic	I	C	R	√	
	20.0.6.5	Explain how life changes affect personal work ethic	I	C	R	√	

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Unit: 20. Employability Skills (continued)			10	12	AD	LL	WS
Competency	**20.0.7**	**Exhibit appropriate work ethic**	I	R	R	√	
Builders:	20.0.7.1	Use time-management techniques	I	C	R	√	
	20.0.7.2	Avoid personal activities during work hours	I	C	R	√	
	20.0.7.3	Attend work as scheduled	I	C	R	√	
	20.0.7.4	Follow company, governmental, and regulatory policies, procedures, rules, and regulations	I	C	R	√	
	20.0.7.5	Exercise confidentiality		C	R	√	
	20.0.7.6	Develop human relations skills	I	C	R	√	
	20.0.7.7	Adhere to rules of conduct	I	C	R	√	
	20.0.7.8	Utilize constructive criticism	I	C	R	√	
	20.0.7.9	Take pride in work	I	C	R	√	
	20.0.7.10	Resolve conflict	I	R	R	√	
	20.0.7.11	Manage stress	I	R	R	√	
	20.0.7.12	Avoid negative sexual connotations and harassment	I	C	R	√	
	20.0.7.13	Adjust to different work styles	I	R	R	√	√
	20.0.7.14	Demonstrate punctuality	I	C	R	√	
	20.0.7.15	Assume responsibility for personal decisions and actions	I	C	R	√	
Competency	**20.0.8**	**Apply decision-making techniques in the workplace**	I	C	R	√	
Builders:	20.0.8.1	Identify the decision to be made	I	C	R	√	
	20.0.8.2	Identify ownership of decision to be made	I	C	R	√	
	20.0.8.3	Compare alternatives	I	C	R	√	
	20.0.8.4	Identify consequences of each alternative	I	C	R	√	
	20.0.8.5	Make decisions based on values, goals, and/or corporate culture	I	C	R	√	
	20.0.8.6	Make decisions in a timely manner	I	C	R	√	
	20.0.8.7	Present decision to be implemented	I	C	R	√	
	20.0.8.8	Evaluate the decision made	I	C	R	√	
	20.0.8.9	Take responsibility for decision	I	C	R	√	

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***Unit:* 20. *Employability Skills* (*continued*)**			**10**	**12**	**AD**	**LL**	**WS**
Competency	**20.0.9**	**Apply problem-solving techniques in work place**	**I**	C	**R**	√	
Builders:	20.0.9.1	Identify problem	I	C	R	√	
	20.0.9.2	Select appropriate problem solving techniques	I	C	R	√	
	20.0.9.3	Identify problem causes	I	C	R	√	
	20.0.9.4	Identify possible solutions and their consequences	I	C	R	√	
	20.0.9.5	Utilize resources to explore possible solutions to problem	I	C	R	√	
	20.0.9.6	Contrast advantages and disadvantages of each solution	I	C	R	√	
	20.0.9.7	Take appropriate action	I	C	R	√	
	20.0.9.8	Evaluate results	I	C	R	√	
	20.0.9.9	Describe multi-cultural and non-sexist dimensions of problem solving	I	C	R	√	
Competency	**20.0.10**	**Exhibit characteristics for job advancement**	**I**	C	**R**	√	√
Builders:	20.0.10.1	Exhibit positive attitude	I	C	R	√	√
	20.0.10.2	Demonstrate knowledge of position	I	C	R	√	√
	20.0.10.3	Perform quality work	I	C	R	√	√
	20.0.10.4	Adapt to changing situations and technology	I	C	R	√	√
	20.0.10.5	Demonstrate capability for different positions	I	C	R	√	√
	20.0.10.6	Identify characteristics of effective leaders	I	C	R	√	√
	20.0.10.7	Identify opportunities for leadership in work place/community	I	C	R	√	√
	20.0.10.8	Display creative abilities and/or initiative to affect change in work place	I	C	R	√	√
	20.0.10.9	Participate in continuing education/training programs	I	C	R	√	√
	20.0.10.10	Explain purpose of supervision, self-discipline and performance evaluation	I	C	R	√	√
	20.0.10.11	Identify appropriate response(s) to criticism from employer, supervisor, or other employees	I	C	R	√	√
	20.0.10.12	Exhibit awareness of corporate culture	I	C	R	√	√

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Unit: 21. Professionalism		10	12	AD	LL	WS
Competency 21.0.1	**Project professional image**	**I**	C	**R**	√	
Builders: 21.0.1.1	Define professionalism	I	C	R	√	
21.0.1.2	Exhibit professional appearance	I	C	R	√	
21.0.1.3	Exhibit professional manners	I	C	R	√	
21.0.1.4	Exhibit professional attitude	I	C	R	√	
21.0.1.5	Describe the individual's vital role in organization	I	C	R	√	
21.0.1.6	Exhibit proper etiquette in professionally-related situations	I	C	R	√	
Competency 21.0.2	**Develop personal and professional goals**	**I**	C	**R**	√	
Builders: 21.0.2.1	Identify goals	I	C	R	√	
21.0.2.2	Explain how personal values affect goals	I	C	R	√	
21.0.2.3	Set flexible, achievable, realistic, and measurable goals	I	C	R	√	
21.0.2.4	Breakdown long-term goals into short-term goals	I	C	R	√	
21.0.2.5	Prioritize goals	I	C	R	√	
21.0.2.6	Make commitment to goals	I	C	R	√	
21.0.2.7	Adjust goals	I	C	R	√	
21.0.2.8	Obtain support for goals	I	C	R	√	
21.0.2.9	Reward goal achievement	I	C	R	√	
Competency 21.0.3	**Develop a management plan to achieve goals**	**I**	C	**R**	√	
Builders: 21.0.3.1	Accept personal responsibilities for setting and reaching goals	I	C	R	√	
21.0.3.2	Identify potential barriers to achieving goals	I	C	R	√	
21.0.3.3	Identify strategies for addressing barriers to goal achievement	I	C	R	√	
21.0.3.4	Identify how to use resources to achieve goals	I	C	R	√	
21.0.3.5	Evaluate availability of resources to achieve education/training goals	I	C	R	√	

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*Unit: 21. **Professionalism*** *(continued)*			10	12	AD	LL	WS
Competency	**21.0.4**	**Support community well-being**	**I**	C	**R**	√	
Builders:	21.0.4.1	Identify environmental, educational, and social issues	I	C	R	√	
	21.0.4.2	Participate in social and/or community activities	I	C	R	√	
Competency	**21.0.5**	**Achieve organizational goals**	**I**	C	**R**	√	√
Builders:	21.0.5.1	Identify personal goals in relation to organizational goals	I	C	R	√	√
	21.0.5.2	Monitor progress by soliciting feedback	I	C	R	√	√
	21.0.5.3	Identify responsibilities in relation to organizational goals	I	C	R	√	√
	21.0.5.4	Accomplish assigned tasks	I	C	R	√	√
	21.0.5.5	Promote organizational mission	I	C	R	√	√
	21.0.5.6	Exercise responsibility in relation to organizational goals	I	C	R	√	√
	21.0.5.7	Communicate goals with supervisor and peers	I	C	R	√	√
Competency	**21.0.6**	**Demonstrate positive relations with coworkers and employers**	**I**	C	**R**	√	
Builders:	21.0.6.1	Identify personality types of self and others	I	C	R	√	
	21.0.6.2	Accept constructive criticism	I	C	R	√	
	21.0.6.3	Give constructive feedback	I	C	R	√	
	21.0.6.4	Adapt to changes in workplace (e.g., assignment changes, workload changes, staff changes)	I	C	R	√	
	21.0.6.5	Accept appropriate supervision	I	C	R	√	
	21.0.6.6	Follow the chain of command	I	C	R	√	
	21.0.6.7	Demonstrate self-motivation and initiative	I	C	R	√	

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***Unit: 21. Professionalism** (continued)*	**10**	**12**	**AD**	**LL**	**WS**
Competency 21.0.7 **Manage stressful situations**	**I**	**C**	**R**	✓	
Builders: 21.0.7.1 Accept stress as part of daily life	I	C	R	✓	
21.0.7.2 Identify personal and professional factors contributing to stress	I	C	R	✓	
21.0.7.3 Describe physical and emotional responses to stress	I	C	R	✓	
21.0.7.4 Evaluate positive and negative effects of stress on productivity	I	C	R	✓	
21.0.7.5 Implement strategies to manage stress	I	C	R	✓	
21.0.7.6 Identify strategies for reducing stress	I	C	R	✓	
21.0.7.7 Create strategies for developing and maintaining support systems	I	C	R	✓	
Competency 21.0.8 **Balance work and family**	**I**	**C**	**R**	✓	✓
Builders: 21.0.8.1 Describe how family values, goals, and priorities are reflected in workplace	I	C	R	✓	✓
21.0.8.2 Identify responsibilities and rewards associated with paid and non-paid work	I	C	R	✓	✓
21.0.8.3 Identify responsibilities and rewards associated with families	I	C	R	✓	✓
21.0.8.4 Explain how family responsibilities can conflict with work	I	C	R	✓	✓
21.0.8.5 Explain how work can conflict with family responsibilities	I	C	R	✓	✓
21.0.8.6 Explain how work-related stress can affect families	I	C	R	✓	✓
21.0.8.7 Explain how family-related stress can affect work	I	C	R	✓	✓
21.0.8.8 Identify family support systems and resources	I	C	R	✓	✓
21.0.8.9 Identify work-related support systems and resources	I	C	R	✓	✓
21.0.8.10 Communicate with family regarding work	I	C	R	✓	✓

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Unit: 21. Professionalism (continued)			10	12	AD	LL	WS
Competency	**21.0.9**	**Apply lifelong learning skills**	**I**	**R**	**R**	√	
Builders:	21.0.9.1	Define lifelong learning	I	C	R	√	
	21.0.9.2	Identify factors that cause need for lifelong learning	I	C	R	√	
	21.0.9.3	Analyze effects of change	I	C	R	√	
	21.0.9.4	Identify reasons why goals change	I	C	R	√	
	21.0.9.5	Describe importance of flexibility and adaptability	I	C	R	√	
	21.0.9.6	Explain need for continuing education/training	I	C	R	√	
	21.0.9.7	Develop professional network	I	R	R	√	
Competency	**21.0.10**	**Manage professional development**	**I**	**R**	**R**	√	√
Builders:	21.0.10.1	Identify new career opportunities	I	R	R	√	√
	21.0.10.2	Modify career plan as needed	I	R	R	√	√
	21.0.10.3	Participate in continuing education/training opportunities	I	R	R	√	√
	21.0.10.4	Document continuing education/training	I	R	R	√	√
	21.0.10.5	Read profession-related manuals, technical journals, and periodicals	I	R	R	√	√
	21.0.10.6	Attend meetings, workshops, seminars, conferences, and demonstrations	I	R	R	√	√
	21.0.10.7	Participate in professional organizations	I	R	R	√	√
	21.0.10.8	Develop personal/professional mentor relationship	I	R	R	√	√
	21.0.10.9	Develop personal/professional support system	I	R	R	√	√
	21.0.10.10	Strengthen communication skills	I	R	R	√	√
	21.0.10.11	Strengthen leadership skills	I	R	R	√	√
	21.0.10.12	Strengthen management skills	I	R	R	√	√

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Unit:		***22. Radiography***	10	12	AD	LL	WS
Competency	**22.0.1**	**Identify characteristics of radiation**		I	C		
Builders:	22.0.1.1	Explain where x-rays are in the electromagnetic spectrum		I	C		
	22.0.1.2	Identify characteristics of radiation (e.g., no mass or charge)		I	C		
	22.0.1.3	Differentiate between ionizing and non-ionizing radiations		I	C		
	22.0.1.4	Compare different methods of measuring radiation		I	C		
	22.0.1.5	Compare different types of radiation (e.g., alpha, beta, natural, man-made)		I	C		
Competency	**22.0.2**	**Explain how x-rays are produced**			C		
Builders:	22.0.2.1	Identify the different parts of the x-ray tube and circuitry			C		
	22.0.2.2	Describe the process for production of x-radiation			C		
	22.0.2.3	Differentiate among the different types of radiation produced			C		
	22.0.2.4	Apply radiographic formulas and their effect on x-ray production			C		
	22.0.2.5	Explain Ma, KvP and time and their relationship on x-ray production			C		
	22.0.2.6	Describe factors that affect radiographic density, contrast, detail, and distortion			C		
Competency	**22.0.3**	**Describe effects of radiation on the human body**		I	C		
Builders:	22.0.3.1	Explain somatic and genetic effects of ionizing radiation		I	C		
	22.0.3.2	Identify tissues most and least sensitive to radiation		I	C		
	22.0.3.3	Differentiate among exposure variables and their effects, both acute and chronic			C		
	22.0.3.4	Describe methods for reducing patient and radiographer exposure			C		
	22.0.3.5	Explain methods of radiation protection		I	C		
	22.0.3.6	Identify common methods of personnel monitoring		I	C		

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***Unit:* 22. *Radiography* (*continued*)**			**10**	**12**	**AD**	**LL**	**WS**
Competency	**22.0.4**	**Demonstrate knowledge of diagnostic radiology procedures**			I	√	
Builders:	22.0.4.1	Perform common radiological procedures			C	√	
	22.0.4.2	Perform common fluoroscopic procedures			C	√	
	22.0.4.3	Perform common quality control procedures			C	√	
	22.0.4.4	Describe common mammography procedures			I	√	√
	22.0.4.5	Describe common computerized tomography procedures			I	√	√
	22.0.4.6	Describe common magnetic resonance procedures			I	√	√
	22.0.4.7	Describe common sonography procedures			I	√	√
	22.0.4.8	Describe common special procedures			I	√	√
	22.0.4.9	Describe common nuclear medicine procedures			I	√	
	22.0.4.10	Describe common radiation therapy procedures			I	√	
Competency	**22.0.5**	**Practice radiation safety procedures**		I	C	√	
Builders:	22.0.5.1	Demonstrate radiation safety precautions for patients			C	√	
	22.0.5.2	Demonstrate radiation safety precautions for operators		I	C	√	
	22.0.5.3	Comply with equipment safety laws			C	√	
	22.0.5.4	Wear radiation monitoring device(s) while on duty			C		
	22.0.5.5	Document personal radiation exposure			C		
	22.0.5.6	Question female patients about possible pregnancy and alert physician		I	C		
	22.0.5.7	Remove all unnecessary persons from area prior to taking radiograph		I	C		
	22.0.5.8	Perform safety checks of radiographic equipment and accessories (e.g., lead aprons and gloves, collimator accuracy)			C		
	22.0.5.9	Place protective shield(s) over patient's radio-sensitive organs prior to exposure			C		
	22.0.5.10	Minimize personal/patient radiation exposure through principles of time, distance, and shielding		I	C		
	22.0.5.11	Report radiologic accidents immediately to proper authorities			C		

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***Unit: 22. Radiography** (continued)*		10	12	AD	LL	WS
Competency 22.0.6	**Provide accurate radiographic record identification and retrieval**		I	C		
Builders: 22.0.6.1	Record required information following performance examination			C		
22.0.6.2	Retrieve radiographic patient records (e.g., radiographs or reports)		C	R		
22.0.6.3	Identify patient using information on request form		C	R		
22.0.6.4	Confirm patient's identity by checking wristband and by questioning patient		C	R		
22.0.6.5	Imprint proper patient identification and markers onto film		C	R		
22.0.6.6	Verify correctness of patient identification and markers on film			C		
22.0.6.7	Combine radiographic requisition with radiographs for interpretation and filing			C		
22.0.6.8	Check radiographic requisition to verify accuracy of information		C	R		
Competency 22.0.7	**Provide patient care**		I	C		
Builders: 22.0.7.1	Explain procedure to patient to gain patient's cooperation			C		
22.0.7.2	Assist physician in observing vital signs		C	R		
22.0.7.3	Assist physician with radiographic procedure if requested		I	C		
22.0.7.4	Monitor medical equipment attached to patient (e.g., IVs, oxygen) while in radiology department		I	C		
22.0.7.5	Elicit patient history which might indicate a risk or a reaction (e.g., allergies, tape sensitivities; injection of iodinated contrast media)			C		
22.0.7.6	Identify need for medical attention and administer emergency care to patient in critical situation (e.g., bleeding; epileptic seizure; contrast media reactions; respiratory/cardiac stress)			C		
22.0.7.7	Assist patient in moving, transferring and ambulating		C	R		

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***Unit: 22. Radiography** (continued)*		10	12	AD	LL	WS
Competency 22.0.8	**Demonstrate knowledge of equipment**			C	√	
Builders: 22.0.8.1	Demonstrate the function of a diagnostic x-ray unit			C	√	
22.0.8.2	Demonstrate the function of a fluoroscopic unit			C	√	
22.0.8.3	Demonstrate the function of a portable x-ray unit			C	√	
22.0.8.4	Demonstrate the function of a portable c-arm unit			C	√	
Competency 22.0.9	**Ready equipment and materials for radiographic procedures**		I	I	√	
Builders: 22.0.9.1	Differentiate among catheters, dilators, guidewires, and needles by size, type, and/or function			I	√	
22.0.9.2	Warm-up x-ray tube to achieve proper operating conditions			C		
22.0.9.3	Measure appropriate patient parts for requested examination			C		
22.0.9.4	Modify exposure factors for circumstances (e.g., body habitus; voluntary/involuntary motion; pathological conditions)			C		
22.0.9.5	Restrict beam exposure to area of interest			C		
22.0.9.6	Set appropriate exposure factors to achieve optimum image quality			C		
22.0.9.7	Perform radiographic examination in a sequence which avoids or minimizes undesirable effects			C		
22.0.9.8	Remove from patient and/or equipment anything that might interfere with radiographic quality		I	C		
22.0.9.9	Assist physician in fluoroscopy by preparing the fluoroscopic unit and accessories for use and by adjusting controls as requested			C		
22.0.9.10	Differentiate among contrast media		I	C	√	
22.0.9.11	Prepare contrast media accurately when appropriate			C	√	
22.0.9.12	Obtain immobilization devices when necessary			C		
22.0.9.13	Obtain adequate cassettes and accessories		I	C		

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Unit: **22.** ***Radiography*** *(continued)*			10	12	AD	LL	WS
Competency	**22.0.10**	**Perform radiographic equipment check procedures**			C	√	
Builders:	22.0.10.1	Perform required quality control testing			C	√	
	22.0.10.2	Report malfunctions in radiographic unit			C	√	
	22.0.10.3	Collect data for ongoing quality assurance monitoring			C	√	
Competency	**22.0.11**	**Demonstrate knowledge of pathological processes that affect radiographic imaging**			C	√	
Builders:	22.0.11.1	Differentiate between additive and destructive pathologies			C	√	
	22.0.11.2	Identify pathological processes that affect each body system		I	C	√	
	22.0.11.3	Correlate pathological conditions on images from various imaging modalities			C	√	
Competency	**22.0.12**	**Maintain supply inventory**		**I**	C		
Builders:	22.0.12.1	Identify supplies to be kept in stock		I	C		
	22.0.12.2	Identify appropriate stock levels		I	C		
	22.0.12.3	Organize supplies		I	C		
	22.0.12.4	Re-order supplies		I	C		
	22.0.12.5	Maintain a clean working environment		I	C		

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Unit: 22. Radiography (continued)	10	12	AD	LL	WS
Competency 22.0.13 Perform radiographic procedures			C	✓	
Builders: 22.0.13.1 Apply universal precautions		C	R	✓	
22.0.13.2 Align patient, radiographic/fluoroscopic unit, and image receptor to produce images of requested anatomical structures/systems			C	✓	
22.0.13.3 Use immobilization devices as needed			C	✓	
22.0.13.4 Use body landmarks and standard radiographic positions to expose the desired anatomical part(s)			C	✓	
22.0.13.5 Initiate rotor prior to making exposure			C	✓	
22.0.13.6 Give patient appropriate breathing instructions prior to making exposure			C	✓	
22.0.13.7 Check radiographs to assure optimum diagnostic image quality to include density, contrast, detail, distortion, and positioning			C	✓	
22.0.13.8 Identify corrective measure if radiograph is not of diagnostic quality			C	✓	
Competency 22.0.14 Process exposed radiographic film		I	C		
Builders: 22.0.14.1 Follow manufacturer's instructions for x-ray processors and solutions		I	C		
22.0.14.2 Follow darkroom procedures		I	C		
22.0.14.3 Unload cassettes		I	C		
22.0.14.4 Handle film and cassettes properly		I	C		
22.0.14.5 Check processor temperatures		I	C		
22.0.14.6 Load film into processor		I	C		
22.0.14.7 Follow safety precautions to prevent eye injury and minor burns		I	C		
22.0.14.8 Dispose of solutions/containers in accordance with EPA regulations		I	C		
22.0.14.9 Reload cassettes		I	C		
22.0.14.10 Clean equipment		I	C		
22.0.14.11 Monitor performance of automatic processor using sensitometry			C	✓	
22.0.14.12 Report malfunctions in automatic processor		I	C		
22.0.14.13 Explain different processing methods		I	C		

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***Unit: 22. Radiography** (continued)*			10	12	AD	LL	WS
Competency	**22.0.15**	**Store radiographs**		C	R		
Builders:	22.0.15.1	Handle radiograph(s) properly		C	R		
	22.0.15.2	Hang radiographs on viewboxes in proper orientation		C	R		
	22.0.15.3	File radiographs		C	R		
Competency	**22.0.16**	**Maintain unexposed radiographic film storage**		C	R		
Builders:	22.0.16.1	Check expiration date		C	R		
	22.0.16.2	Follow manufacturer's instructions for proper film storage and stock rotation		C	R		

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Unit: 23. Respiratory Care			10	12	AD	LL	WS
Competency	**23.0.1**	**Identify respiratory care modalities**		I	C	√	
Builders:	23.0.1.1	List areas and procedures in which respiratory therapy is involved with patient care		I	C	√	
	23.0.1.2	Describe the rationale for hyperinflation therapy			C	√	
	23.0.1.3	List categories of diagnostic and patient monitoring procedures			C	√	
	23.0.1.4	List conditions/diseases of patients who receive respiratory therapy treatment		I	C	√	
	23.0.1.5	List indications for oxygen therapy			C	√	
	23.0.1.6	List indications for aerosol and humidity administration			C	√	
	23.0.1.7	List indications for the use of chest percussion/chest physiotherapy			C	√	
	23.0.1.8	List indications for naso-tracheal, endotracheal, tracheal suctioning			C	√	
	23.0.1.9	List goals of pulmonary rehabilitation and patient education			C	√	
	23.0.1.10	Differentiate between educational programs of specialized respiratory care practitioners		I	C	√	
	23.0.1.11	List indications for mechanical ventilation and airway management			C	√	

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Unit: 23. ***Respiratory Care*** *(continued)*		10	12	AD	LL	WS
Competency 23.0.2	**Prepare respiratory therapy equipment for patient use**		I	C	√	
Builders: 23.0.2.1	Explain purpose and application of respiratory therapy equipment			C	√	
23.0.2.2	Identify oxygen administration devices		I	C	√	
23.0.2.3	Identify aerosol equipment (e.g., nebulizers, mist tents, trach collars, etc.)			C	√	
23.0.2.4	Identify humidifiers		I	C	√	
23.0.2.5	Identify gas delivery, metering, and analyzing devices			C	√	
23.0.2.6	Identify suction equipment components		I	C	√	
23.0.2.7	Identify various patient breathing circuits (e.g., IPPB, CPAP, BIPAP, IPV, NASAL CPAP)			C	√	
23.0.2.8	Explain use of manometers and gauges			C	√	
23.0.2.9	Verify proper assembly of respiratory therapy equipment			C	√	
23.0.2.10	Disassemble respiratory equipment			C	√	
23.0.2.11	Follow manufacturer's instructions for safe operation of all equipment			C	√	
Competency 23.0.3	**Prepare life-support equipment for patient use**			C	√	
Builders: 23.0.3.1	Explain purpose and application of life-support equipment			C	√	
23.0.3.2	Identify resuscitation equipment			C	√	
23.0.3.3	Verify proper assembly of resuscitation equipment			C	√	
23.0.3.4	Disassemble resuscitation equipment for cleaning			C	√	

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Unit: 23. Respiratory Care (continued)			10	12	AD	LL	WS
Competency 23.0.4		**Prepare diagnostic equipment for patient use**		I	C	√	
Builders:	23.0.4.1	Explain purpose and application of various diagnostic equipment (e.g., pulse-oximeter, apnea monitor)		I	C	√	
	23.0.4.2	Identify diagnostic equipment			C	√	
	23.0.4.3	Assemble bedside spirometry equipment		I	C	√	
	23.0.4.4	Disassemble bedside spirometry equipment		I	C	√	
	23.0.4.5	Explain function of blood gas machine (e.g., operation of electrodes)			C	√	
	23.0.4.6	Demonstrate maintenance and quality control of blood gas machine			C	√	
Competency 23.0.5		**Demonstrate proper procedures for using flowmeters, regulators, gauges, and compressed gas cylinders**		I	C	√	
Builders:	23.0.5.1	Identify the potential dangers associated with the use and transportation of compressed gases		I	C	√	
	23.0.5.2	Identify safety measures associated with the use, transportation, and storage of compressed gases		I	C	√	
	23.0.5.3	Outline the procedures for handling, maintaining, storing, and transporting flowmeters, regulators, gauges, and compressed gas cylinders		I	C	√	
	23.0.5.4	List methods by which medical gas cylinders are identified		I	C	√	
	23.0.5.5	Identify medical gases			C	√	

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Unit:* 23. *Respiratory Care* *(continued)		10	12	AD	LL	WS
Competency 23.0.6	**Demonstrate proper procedures for changing flowmeters, regulators, gauges, and compressed gas cylinders**			C	✓	
Builders: 23.0.6.1	Identify Pin Index Safety System			C	✓	
23.0.6.2	Identify Diameter Index Safety System			C	✓	
23.0.6.3	Identify Compressed Gas Association (CGA) Safety System			C	✓	
23.0.6.4	Read cylinder pressure remaining in medical compressed gas cylinder and calculate duration			C	✓	
23.0.6.5	List possible hazards involved in changing the regulator on a compressed gas cylinder			C	✓	
23.0.6.6	Demonstrate changing flowmeters, regulators, gauges, and compressed gas cylinders			C	✓	
23.0.6.7	Verify proper operation of the flowmeters, regulators, gauges, and compressed gas cylinders			C	✓	
Competency 23.0.7	**Demonstrate knowledge of proper procedures for changing and monitoring bulk manifold compressed gas cylinders**			C	✓	
Builders: 23.0.7.1	Define bulk gas system			C	✓	
23.0.7.2	Identify the components of a manifold system			C	✓	
23.0.7.3	Identify the components of a piping delivery system			C	✓	
23.0.7.4	Identify items to be monitored in a bulk manifold compressed gas system			C	✓	
23.0.7.5	Demonstrate proper technique for backfeeding oxygen supply			C	✓	
23.0.7.6	Explain operation and use of zone valves			C	✓	

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Unit:* 23. *Respiratory Care (continued)		10	12	AD	LL	WS
Competency 23.0.8	**Disinfect or sterilize respiratory therapy equipment**		I	C	✓	
Builders: 23.0.8.1	Define particulates, bacteria, viruses, fungi, rickettsiae, and spores		I	C	✓	
23.0.8.2	Describe infectious hazards regarding respiratory therapy equipment		I	C	✓	
23.0.8.3	Differentiate between disposable and reusable equipment		I	C	✓	
23.0.8.4	Package components and ancillary equipment for sterilization			C	✓	
23.0.8.5	Identify methods for sterilizing and disinfecting reusable equipment		I	C	✓	
23.0.8.6	Outline proper cleaning, disinfecting, and sterilizing methods			C	✓	
23.0.8.7	Demonstrate safe practice in cold liquid disinfection and sterilization			C	✓	
23.0.8.8	Demonstrate safe practice in gas sterilization			C	✓	
Competency 23.0.9	**Demonstrate understanding of quality control procedures for disinfection and sterilization techniques**		I	C	✓	
Builders: 23.0.9.1	Explain how spore strip is used to guarantee sterilization of equipment		I	C	✓	
23.0.9.2	Explain why proper dating of sterilized equipment is necessary		I	C	✓	
23.0.9.3	Explain why proper documentation of disinfection and sterilization procedures is necessary to protect hospital patients		I	C	✓	
23.0.9.4	Identify circumstances which would warrant replacement of liquid disinfectant/sterilization agents		I	C	✓	

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***Unit: 23. Respiratory Care** (continued)*			10	12	AD	LL	WS
Competency 23.0.10		**Change respiratory therapy equipment in patient care areas of a hospital**			C	√	
Builders:	23.0.10.1	Identify safety measures to be taken before, during, and after changing respiratory equipment			C	√	
	23.0.10.2	Demonstrate proper communications with the patient whose equipment is being changed			C	√	
	23.0.10.3	Demonstrate changing an oxygen delivery device which is in use on a patient			C	√	
	23.0.10.4	Verify proper operation of respiratory equipment			C	√	
	23.0.10.5	Demonstrate proper documentation of any patient care procedure			C	√	
Competency 23.0.11		**Test respiratory therapy equipment for proper operation and patient readiness**			C	√	
Builders:	23.0.11.1	Verify that equipment components are assembled properly with all necessary accessories			C	√	
	23.0.11.2	Check safety check of all components			C	√	
	23.0.11.3	Check equipment components for cleanliness and/or appropriate disinfection or sterilization and packaging			C	√	
	23.0.11.4	Verify all equipment functions as required			C	√	
	23.0.11.5	Document faulty or defective equipment			C	√	
	23.0.11.6	Troubleshoot equipment for proper functioning			C	√	
	23.0.11.7	Change equipment as needed			C	√	
	23.0.11.8	Follow manufacturer's instructions for safe operation of equipment			C	√	
Competency 23.0.12		**Demonstrate proper safety precautions in the transport and delivery of equipment**		C	R	√	
Builders:	23.0.12.1	Outline methods of safe movement of equipment through a hospital environment		C	R	√	
	23.0.12.2	Identify potential hazards associated with the movement of respiratory therapy equipment through the hospital environment		C	R	√	
	23.0.12.3	Identify safety measures related to the delivery and placement of the equipment in patient care areas of a hospital environment		C	R	√	

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***Unit: 23. Respiratory Care** (continued)*			10	12	AD	LL	WS
Competency	**23.0.13**	**Explain purpose of hemodynamic monitoring**			C	√	
Builders:	23.0.13.1	Explain purpose of Swan Ganz catheter			C	√	
	23.0.13.2	Explain purpose of CVP catheter			C	√	
	23.0.13.3	Demonstrate ability to draw blood from arterial line			C	√	
	23.0.13.4	Explain procedures used for hemodynamic monitoring			C	√	
	23.0.13.5	Perform hemodynamic calculations			C	√	
Competency	**23.0.14**	**Demonstrate proper patient assessment**		I	C	√	
Builders:	23.0.14.1	Identify patient		C	R	√	
	23.0.14.2	Demonstrate ability to interview patient		I	C	√	
	23.0.14.3	Demonstrate ability to obtain vital signs (pulse, BP, RR)		C	R	√	
	23.0.14.4	Calculate patient's ideal body weight		C	R	√	
	23.0.14.5	Demonstrate ability to obtain pulse oximetry and bedside spirometry			C	√	
	23.0.14.6	Perform proper chest evaluation including inspection, auscultation, percussion and palpation			C	√	
	23.0.14.7	Demonstrate ability to interpret information obtained			C	√	
	23.0.14.8	Demonstrate ability to develop a care plan based on the patient's assessment			C	√	

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Unit: 23. Respiratory Care (continued)	10	12	AD	LL	WS
Competency 23.0.15 Demonstrate manual ventilation and suctioning			C	√	
Builders: 23.0.15.1 Identify patient		C	R	√	
23.0.15.2 Describe differences between manual ventilation equipment			C	√	
23.0.15.3 Identify indications, contraindications, hazards and side effects of manual ventilation and suctioning			C	√	
23.0.15.4 Determine if patient is a candidate for suctioning according to CPG			C	√	
23.0.15.5 Determine type of suction appropriate for the patient (naso-trach, tracheal, endotracheal)			C	√	
23.0.15.6 Explain proper vacuum range for suctioning			C	√	
23.0.15.7 Demonstrate ability to suction properly maintaining sterile technique			C	√	
23.0.15.8 Demonstrate ability to manually ventilate patient			C	√	
23.0.15.9 Document and notify appropriate personnel			C	√	
Competency 23.0.16 Perform bronchopulmonary hygiene			C	√	
Builders: 23.0.16.1 Identify patient		C	R	√	
23.0.16.2 Determine if patient is a candidate for bronchopulmonary hygiene according to CPG			C	√	
23.0.16.3 Explain indications, contraindications, hazards and side effects of BPH			C	√	
23.0.16.4 Demonstrate ability to properly position patient for BPH according to physician's orders			C	√	
23.0.16.5 Demonstrate ability to position patient properly for drainage of all lung segments			C	√	
23.0.16.6 Demonstrate proper technique to effectively perform BPH			C	√	
23.0.16.7 Document patient response to therapy			C	√	
23.0.16.8 Verify MD order			C	√	

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***Unit: 23. Respiratory Care** (continued)*	10	12	AD	LL	WS
Competency 23.0.17 Perform pulmonary function tests		I	C	√	
Builders: 23.0.17.1 Identify volumes and capacities		I	C	√	
23.0.17.2 Identify major pulmonary tests			C	√	
23.0.17.3 Calibrate testing equipment			C	√	
23.0.17.4 Solicit patient cooperation		I	C	√	
23.0.17.5 Use equipment to test pulmonary function			C	√	
23.0.17.6 Demonstrate proper use of equipment to test pulmonary function			C	√	
Competency 23.0.18 Educate patient/responsible party about care related to pulmonary rehab		I	C	√	
Builders: 23.0.18.1 Identify support groups and resources		I	C	√	
23.0.18.2 Obtain verbal and written information to plan patient's/client's care			C	√	
23.0.18.3 Reinforce special diets with patient/client/responsible party			C	√	
23.0.18.4 Reinforce recommended exercise programs with patient/client/responsible party			C	√	
23.0.18.5 Reinforce self-administration of medications with patient/client/responsible party			C	√	
23.0.18.6 Reinforce health maintenance techniques with patient/client/responsible party		I	C	√	
23.0.18.7 Refer patient/client to support groups and resources		I	C	√	
23.0.18.8 Solicit patient/client/responsible party feedback		I	C	√	
23.0.18.9 Record teaching and patient/client response		I	C	√	
23.0.18.10 Instruct patient/client/responsible party in necessary adaptations to environment		I	C	√	
23.0.18.11 Instruct patient/client/responsible party in adaptive techniques (e.g., activities of daily living, homemaking)		I	C	√	
23.0.18.12 Respond to request from patient's/client's funding source		I	C	√	
23.0.18.13 Instruct patient/client on use of equipment			C	√	
23.0.18.14 Instruct patient on home therapy program			C	√	

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Unit: 23. Respiratory Care (continued)	10	12	AD	LL	WS
Competency 23.0.19 **Classify mechanical ventilators**			C	✓	
Builders: 23.0.19.1 Identify model of ventilator (including safety features and alarms)			C	✓	
23.0.19.2 Identify various modes of ventilation			C	✓	
23.0.19.3 Identify type of ventilators (volume vs. pressure)			C	✓	
23.0.19.4 Identify electrical and pneumatic supplies to ventilator			C	✓	
Competency 23.0.20 **Manage mechanical ventilator**			C	✓	
Builders: 23.0.20.1 Assess patient (see specific competency)			C	✓	
23.0.20.2 Select appropriate ventilator for patient			C	✓	
23.0.20.3 Demonstrate proper set-up of mechanical ventilator			C	✓	
23.0.20.4 Assess proper ventilator function			C	✓	
23.0.20.5 Perform ventilator system check			C	✓	
23.0.20.6 Adjust ventilator to meet patient needs			C	✓	
23.0.20.7 Reassess patient and make proper ventilator changes			C	✓	
23.0.20.8 Demonstrate proper documentation of all patient information			C	✓	
Competency 23.0.21 **Wean patient from mechanical ventilator**			C	✓	
Builders: 23.0.21.1 Assess patient (see specific competency)			C	✓	
23.0.21.2 Identify criteria for weaning			C	✓	
23.0.21.3 Demonstrate ability to properly interpret weaning data			C	✓	
23.0.21.4 Demonstrate extubation procedure			C	✓	
23.0.21.5 Identify equipment needed for weaning and extubation			C	✓	

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***Unit: 23. Respiratory Care** (continued)*	10	12	AD	LL	WS
Competency 23.0.22 Perform arterial blood gas draws			C	✓	
Builders: 23.0.22.1 Identify patient			C	✓	
23.0.22.2 Identify sites for arterial blood gas draws			C	✓	
23.0.22.3 Explain purpose of Allen's test			C	✓	
23.0.22.4 Demonstrate Allen's test			C	✓	
23.0.22.5 Describe equipment needed for arterial blood gas draws			C	✓	
23.0.22.6 Demonstrate proper procedures for arterial blood gas draws			C	✓	
23.0.22.7 Demonstrate proper disposal of equipment			C	✓	
23.0.22.8 Explain adverse reactions associated with arterial blood gas draws			C	✓	
23.0.22.9 Explain universal precaution procedures for transporting arterial blood gas samples to lab			C	✓	
23.0.22.10 Demonstrate ability to properly interpret results of blood gases			C	✓	
Competency 23.0.23 Perform electrocardiograms		I	C	✓	
Builders: 23.0.23.1 Calibrate testing equipment		I	C	✓	
23.0.23.2 Solicit patient cooperation		I	C	✓	
23.0.23.3 Evaluate test validity and reliability		I	C	✓	
23.0.23.4 Perform a 12-lead EKG		I	C	✓	
Competency 23.0.24 Evaluate chest X-rays			C	✓	
Builders: 23.0.24.1 Identify normal versus abnormal			C	✓	
23.0.24.2 Identify tube placements			C	✓	
23.0.24.3 Identify relationship to pulmonary diseases			C	✓	
Competency 23.0.25 Explain pulmonary pathology			C	✓	
Builders: 23.0.25.1 Identify pulmonary diseases			C	✓	
23.0.25.2 Identify diagnostic criteria			C	✓	
23.0.25.3 Identify accepted treatments			C	✓	

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Unit: 23. Respiratory Care *(continued)*			10	12	AD	LL	WS
Competency	**23.0.26**	**Perform neonatal/pediatric respiratory care**			C	√	
Builders:	23.0.26.1	Identify anatomical differences between neonates/pediatrics and adults			C	√	
	23.0.26.2	Describe various abnormalities of neonates			C	√	
	23.0.26.3	Describe different cardiopulmonary disease processes specific to pediatrics/neonates			C	√	
	23.0.26.4	Demonstrate ability to calculate medication dosages appropriate to age and weight			C	√	
	23.0.26.5	Identify differences in mechanical ventilation specific to pediatrics/neonates			C	√	
Competency	**23.0.27**	**Resuscitate neonates/pediatrics**			C	√	
Builders:	23.0.27.1	Obtain certification in code pink or neonatal advanced life support			C	√	
	23.0.27.2	Obtain certification in pediatric advanced life support			C	√	
Competency	**23.0.28**	**Dispense respiratory therapy medications**			C	√	
Builders:	23.0.28.1	Identify patient			C	√	
	23.0.28.2	Verify accuracy and completeness of medication order			C	√	
	23.0.28.3	Explain purpose of respiratory medications to patient			C	√	
	23.0.28.4	Explain indications, actions, contraindications, side effects and hazards of respiratory medications			C	√	
	23.0.28.5	Demonstrate proper assembly of aerosol delivery device			C	√	
	23.0.28.6	Calculate dosages of respiratory therapy medications			C	√	
	23.0.28.7	Document patient/client response to medication			C	√	

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Unit: 23. Respiratory Care (continued)	10	12	AD	LL	WS
Competency 23.0.29 **Demonstrate proper procedure for hyperinflation therapy**			C	√	
Builders: 23.0.29.1 Identify patient			C	√	
23.0.29.2 Determine if patient is a candidate for hyperinflation therapy according to clinical practice guidelines			C	√	
23.0.29.3 Determine proper hyperinflation technique for the patient (i.e., IPPB vs incentive spirometry)			C	√	
23.0.29.4 Identify contraindications and hazards of hyperinflation therapy			C	√	
23.0.29.5 Demonstrate proper hyperinflation technique (IPPB and SMI)			C	√	
23.0.29.6 Monitor patient and document therapy given appropriately			C	√	

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Unit: 24. Histology			10	12	AD	LL	WS
Competency	**24.0.1**	**Perform set-up and workflow functions**			C	✓	✓
Builders:	24.0.1.1	Activate equipment (e.g., embedding center, flotation bath and other automated equipment			C	✓	✓
	24.0.1.2	Perform quality control documentation on equipment and reagents (e.g., temperature; labeling; maintenance)			C	✓	✓
	24.0.1.3	Set up frozen section area (e.g., cryostat, stain set-up, supplies)			C	✓	✓
	24.0.1.4	Set up microtomy area with appropriate supplies (e.g., knife, slides, marker, ice)			C	✓	✓
	24.0.1.5	Prepare tissue dissection area			C	✓	✓
	24.0.1.6	Remove specimens from processors			C	✓	✓
	24.0.1.7	Clean processors			C	✓	✓
	24.0.1.8	Change and fill reagents on processors			C	✓	✓
	24.0.1.9	Collect log/computer sheets and labels for specimens			C	✓	✓
	24.0.1.10	Run a control hematoxylin and eosin (H&E) slide			C	✓	✓
	24.0.1.11	Properly clean and supply laboratory glassware (e.g., acid-cleaned glassware for immuno, silver stains)			C	✓	✓
	24.0.1.12	Prepare reagents, buffers, solutions, and stains as required			C	✓	✓
	24.0.1.13	Maintain all laboratory areas			C	✓	✓
	24.0.1.14	Check alcohol reagents using alcohol hydrometer to determine percentage of solutions			C	✓	✓
	24.0.1.15	Check refrigerator for late specimens from previous day			C	✓	✓
	24.0.1.16	Channel specimens to appropriate laboratory			C	✓	✓
	24.0.1.17	Notify supervisor of needed supplies			C	✓	✓
	24.0.1.18	Accumulate personal protective equipment for use			C	✓	✓
	24.0.1.19	Transport tissue specimens to histology laboratory			C	✓	✓
	24.0.1.20	Assist with specimen collection and handling			C	✓	✓
	24.0.1.21	Package specimen for mailing/shipping			C	✓	✓
	24.0.1.22	Read laboratory procedure manuals			C	✓	✓
	24.0.1.23	Pick up special biopsy specimens (e.g., muscle, sural nerve, cardiac, renal) from appropriate personnel			C	✓	✓

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Unit: 24. Histology (continued)		10	12	AD	LL	WS
Competency 24.0.2	**Perform dissecting functions**		I	C		
Builders: 24.0.2.1	Identify surgical/anatomical specimens			C		
24.0.2.2	Evaluate surgical/anatomical specimens			C		
24.0.2.3	Accession surgical/anatomical specimens			C		
24.0.2.4	Set up specimens to be examined and dictated by pathologists			C		
24.0.2.5	Prepare specimens for fixation			C		
24.0.2.6	Describe function and application of fixation			C		
24.0.2.7	Section frozen sections for rapid diagnosis by pathologists			C		
24.0.2.8	Demonstrate rapid hematoxylin and eosin staining			C		
24.0.2.9	Decalcify bone specimens			C		
24.0.2.10	Describe proper disinfecting of dissection area		I	C		
24.0.2.11	Evaluate specimens for proper patient identification		I	C		
24.0.2.12	Use universal precautions		C	R		
24.0.2.13	Label tissue cassette with proper accession number			C		
Competency 24.0.3	**Perform proper embedding of specimens**			C		
Builders: 24.0.3.1	Describe proper embedding procedures			C		
24.0.3.2	Orient tissue properly with attention to ink markings, type of tissue, and correct size of mold			C		
24.0.3.3	Embed tissue specimens			C		
24.0.3.4	Clean and refill embedding center daily			C		
24.0.3.5	Check accuracy of case numbers on all paraffin blocks on log sheet			C		
24.0.3.6	Describe function and types of embedding media			C		

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Unit: 24. Histology *(continued)*			10	12	AD	LL	WS
Competency	**24.0.4**	**Perform routine histology procedures**			C		
Builders:	24.0.4.1	Perform routine H&E			C		
	24.0.4.2	Coverslip prepared microscopic slides properly			C		
	24.0.4.3	Label slides properly			C		
	24.0.4.4	Identify tissue structures and staining characteristics			C		
	24.0.4.5	Differentiate among well-prepared, poorly-prepared stained histologic specimens			C		
	24.0.4.6	Section a wide variety of embedded specimens using a microtome			C		
	24.0.4.7	Coverslip tissue section using mounting media			C		
	24.0.4.8	Distribute microscopic slides to pathologists for interpretation			C		

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Unit:* 24. *Histology* *(continued)			10	12	AD	LL	WS
Competency	**24.0.5**	**Perform special stains**			C	√	√
Builders:	24.0.5.1	Stain appropriate control for each special stain			C	√	√
	24.0.5.2	Label all reagents in regard to contents, concentration, date received/prepared, expiration date, storage requirements, precautions			C	√	√
	24.0.5.3	Describe routine special stains (e.g., Acid Fast, Gram, Silver, PAS, etc.)			C	√	√
	24.0.5.4	Identify pH properties of buffers and solutions			C	√	√
	24.0.5.5	Demonstrate use of pH meter			C	√	√
	24.0.5.6	Use microscope to evaluate proper staining accuracy			C	√	√
	24.0.5.7	Perform immunoperoxidase procedures to identify antigens in tissue			C	√	√
	24.0.5.8	Describe theory of immunoperoxidase procedures			C	√	√
	24.0.5.9	Perform microwave techniques			C	√	√
	24.0.5.10	Describe theory of microwaving procedures			C	√	√
	24.0.5.11	Describe storage and disposal of corrosives and flammable chemicals			C	√	√
	24.0.5.12	Describe basic chemistry of hematoxylin and eosin staining, special stains, decalcification, and immunoperoxidase			C	√	√
	24.0.5.13	Identify hazard identification labels (e.g., acid, corrosive, biohazard, carcinogenic, etc.)			C	√	√
	24.0.5.14	Describe proper handling of chemicals and specimens			C	√	√
	24.0.5.15	Perform special staining procedures as required			C	√	√
Competency	**24.0.6**	**Store materials safely**		I	C		√
Builders:	24.0.6.1	Label reagents, acids and bases		I	C		√
	24.0.6.2	Store reagents, acids and bases		I	C		√
	24.0.6.3	Store flammables		I	C		√
	24.0.6.4	Store controlled substances		I	C		√
	24.0.6.5	Use Material Safety Data Sheets (MSDS) properly		I	C		√

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Unit: 24. Histology *(continued)*	10	12	AD	LL	WS
Competency 24.0.7 Perform record keeping functions		I	C		√
Builders: 24.0.7.1 Maintain records of all discarded and saved specimens		I	C		√
24.0.7.2 Prepare gross specimens for maintenance in storage			C		√
24.0.7.3 Maintain records for gross specimens that require photography			C		√
24.0.7.4 Maintain accurate records of all procedures performed		I	C		√
24.0.7.5 Process reports, slides, and tissues			C		√
24.0.7.6 File surgical and autopsy blocks			C		√
24.0.7.7 File surgical and autopsy slides			C		√
24.0.7.8 Process billing functions via computer		I	C		√
24.0.7.9 Retrieve slides, reports, blocks and/or tissue for consultation cases			C		√

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Unit: 24. Histology *(continued)*			10	12	AD	LL	WS
Competency	**24.0.8**	**Perform quality control and quality assurance functions**		I	C	√	
Builders:	24.0.8.1	Practice quality control and quality assurance in the histology laboratory as required by the accrediting agency			C	√	
	24.0.8.2	Correct errors and their sources			C	√	
	24.0.8.3	Record information on tissue specimen record sheets			C	√	
	24.0.8.4	Print or type information on labels for accuracy		I	C	√	
	24.0.8.5	Use control slides when performing staining procedures to ensure reliability and validity			C	√	
	24.0.8.6	Maintain quality control on all procedures and regents			C	√	
	24.0.8.7	Check equipment for proper operation and calibrate if necessary			C	√	
	24.0.8.8	Notify supervisor of all malfunctioning equipment		I	C	√	
	24.0.8.9	Accession specimens using a logbook/computer to ensure correct identification		I	C	√	
	24.0.8.10	Log all procedures performed		I	C	√	
	24.0.8.11	Maintain quality control records of equipment and instruments			C	√	
	24.0.8.12	Differentiate proper fixation, dehydration, and infiltration of specimens			C	√	

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Unit: 24. Histology *(continued)*			10	12	AD	LL	WS
Competency 24.0.9		**Operate histology equipment**		I	C		
Builders:	24.0.9.1	Use drying oven			C		
	24.0.9.2	Use tissue processor			C		
	24.0.9.3	Use embedding centers			C		
	24.0.9.4	Use microscope		C	R		
	24.0.9.5	Use microtome			C		
	24.0.9.6	Use water baths			C		
	24.0.9.7	Use Celcius and Fahrenheit thermometers		C	R		
	24.0.9.8	Use cryostat			C		
	24.0.9.9	Use coverslipper			C		
	24.0.9.10	Use pH meter			C		
	24.0.9.11	Use balance		C	R		
	24.0.9.12	Use freezer/refrigerator		C	R		
	24.0.9.13	Use stainers (routine and immuno)			C		
	24.0.9.14	Use paraffin baths			C		
	24.0.9.15	Use microwave oven		C	R		
	24.0.9.16	Use computer terminals		C	R		
	24.0.9.17	Use cassette labelers			C		

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Unit: 25. Hematology			**10**	**12**	**AD**	**LL**	**WS**
Competency 25.0.1		**Use hematology terminology**	**I**	**R**	**C**		
Builders:	25.0.1.1	Define terminology related to hematology (e.g., erythrocytes, lymphopoieses)	I	R	C		
	25.0.1.2	Spell terminology related to hematology	I	R	C		
Competency 25.0.2		**Display knowledge of erythrocytes**		**I**	**C**		
Builders:	25.0.2.1	Explain the maturation series of an erythrocyte from its origin to its final destination in the peripheral blood stream			C		
	25.0.2.2	Describe the formation of bilirubin from the destruction of erythrocytes			C		
	25.0.2.3	Identify pathologies of erythrocytes (e.g., anemias)		I	C		
	25.0.2.4	Identify normal and abnormal values		I	C		
Competency 25.0.3		**Perform erythrocyte evaluations**		**I**	**C**		
Builders:	25.0.3.1	Explain automated erythrocyte testing			C		
	25.0.3.2	Identify normal erythrocyte values		I	C		
	25.0.3.3	Perform red blood cell (erythrocyte) counts (automated and manual)			C		
	25.0.3.4	Perform hemoglobin determinations*		I	C		
	25.0.3.5	Perform and microhematocrit determinations*		I	C		
	25.0.3.6	Perform tests (mean corpuscular volume--MCV, corpuscular hemoglobin--MCH, and corpuscular hemoglobin concentration--MCHC) used in the red blood cell (erythrocyte) indices			C		
	25.0.3.7	Explain principles and uses of erythrocyte sedimentation rate (ESR)			C		
	25.0.3.8	Describe the types and purpose of ESRs: Wintrobe, Westigren, and Zeta sedimentation rates			C		
	25.0.3.9	Perform each ESR procedure			C		
	25.0.3.10	Perform mathematical calculations for MCV, MCH, and MCHC			C		
	25.0.3.11	Perform reticulocyte counts			C		
	25.0.3.12	Perform sickle cell tests			C		
	25.0.3.13	Perform fetal hemoglobin test			C		
*At discretion of local Board of Education							

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Unit: ***25.*** ***Hematology*** *(continued)*			**10**	**12**	**AD**	**LL**	**WS**
Competency	**25.0.4**	**Display knowledge of granulocytes, lymphocytes, monocytes, and thrombocytes**		I	C		
Builders:	25.0.4.1	Identify the maturation series of the neutrophilic granulocytes			C		
	25.0.4.2	Identify the maturation series of the granulocytic eosinophils and basophils			C		
	25.0.4.3	Identify the maturation series of the nongranulocytes-lymphocytes			C		
	25.0.4.4	Identify the maturation series of the nongranulocytes-monocytes			C		
	25.0.4.5	Identify the maturation series of the thrombocytes (platelets)			C		
	25.0.4.6	Explain origin and function of granulocytes, lymphocytes, monocytes, and thrombocytes		I	C		
	25.0.4.7	Identify normal percentages of granulocytes, lymphocytes, monocytes, and thrombocytes		I	C		
	25.0.4.8	Identify pathologies of white blood cells (e.g., leukemia)		I	C		
	25.0.4.9	Identify pathologies of thrombocytes			C		
	25.0.4.10	Identify normal and abnormal values		I	C		
Competency	**25.0.5**	**Perform leukocyte and thrombocyte blood counts and tests**			C		
Builders:	25.0.5.1	Describe the dimensions of the counting chamber			C		
	25.0.5.2	Calculate leukocyte and thrombocyte counts using counting chamber			C		
	25.0.5.3	Perform leukocyte counts			C		
	25.0.5.4	Perform thrombocyte (platelet) counts			C		
	25.0.5.5	Perform white blood cell (WBC) differential counts			C		
	25.0.5.6	Correct leukocyte counts in the presence of nucleated red blood cells			C		
	25.0.5.7	Describe principles of automated cell counters (Coulter principle and laser principle)			C		
	25.0.5.8	Perform direct eosinophile counts			C		

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***Unit: 25. Hematology** (continued)*			10	12	AD	LL	WS
Competency	**25.0.6**	**Prepare blood smear stains**			C		√
Builders:	25.0.6.1	Make a blood film (smear)		I	C		√
	25.0.6.2	Use leukocyte alkaline phosphatase stain			C		√
	25.0.6.3	Stain blood films using Wright's and Giemsa's stains			C		√
	25.0.6.4	Stain thick smear for malaria			C		√
	25.0.6.5	Make cytospin slide			C		√
	25.0.6.6	Use Hansel stains on nasal secretions for eosinophiles			C		√
	25.0.6.7	Stain bone marrow smears			C		√
Competency	**25.0.7**	**Perform body fluid counts**			C		√
Builders:	25.0.7.1	Perform thoracentesis fluid count			C		√
	25.0.7.2	Perform pleural fluid counts			C		√
	25.0.7.3	Perform spinal fluid counts			C		√
	25.0.7.4	Perform joint fluid counts for cells and crystals			C		√
Competency	**25.0.8**	**Perform semen analysis**			C		√
Builders:	25.0.8.1	Define motility			C		√
	25.0.8.2	Describe morphological abnormalities			C		√
	25.0.8.3	Analyze appearance			C		√
	25.0.8.4	Analyze consistency			C		√
	25.0.8.5	Perform sperm count			C		√

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***Unit: 25. Hematology** (continued)*	10	12	AD	LL	WS
Competency 25.0.9 Perform coagulation and hemostasis tests			C		✓
Builders: 25.0.9.1 Describe principle of hemostasis			C		
25.0.9.2 Explain the principle of prothrombin time (PT) test			C		
25.0.9.3 Identify coagulation factors tested for when performing prothrombin time (PT)			C		
25.0.9.4 Perform prothrombin time (PT) test			C		✓
25.0.9.5 Identify coagulation factors by Roman numeral and common name			C		
25.0.9.6 Identify coagulation factors tested for when performing partial thromboplastin time (PTT) test			C		
25.0.9.7 Explain the principle of partial thromboplastin time (PTT or APTT) test			C		
25.0.9.8 Perform partial thromboplastin time (PTT or APTT) test			C		✓
25.0.9.9 Explain the principle of capillary bleeding and clotting time tests			C		
25.0.9.10 Perform capillary bleeding and clotting time tests			C		
25.0.9.11 Perform Duke and Ivy bleeding time test			C		
25.0.9.12 Perform template bleeding time test			C		
25.0.9.13 Explain the principle of fibrinogen test			C		
25.0.9.14 Perform fibrinogen test			C		✓
25.0.9.15 Explain the principle of fibrin degradation test			C		
25.0.9.16 Perform fibrin degradation product and fibrin split product test (FDP or FSP)			C		✓
25.0.9.17 Explain the principle of fibrin monomer test			C		
25.0.9.18 Perform fibrin monomer test			C		✓
25.0.9.19 Identify uses of clot retraction test			C		
25.0.9.20 Perform clot retraction test			C		✓
25.0.9.21 Perform factor assays			C		✓
25.0.9.22 Perform thrombin times			C		✓
25.0.9.23 Identify normal and abnormal values			C		

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Unit: 25. Hematology *(continued)*			10	12	AD	LL	WS
Competency	**25.0.10**	**Maintain related instruments and equipment**			C		✓
Builders:	25.0.10.1	Demonstrate proper use of microscope and centrifuge		I	C		
	25.0.10.2	Demonstrate proper use of glassware and pipettes		I	C		
	25.0.10.3	Demonstrate proper use of automated coagulation and hematology equipment			C		✓
	25.0.10.4	Clean related instruments and equipment			C		✓
	25.0.10.5	Store related instruments and equipment			C		✓
	25.0.10.6	Report needed repairs			C		✓
Competency	**25.0.11**	**Perform quality control**			C		
Builders:	25.0.11.1	Check temperature of coagulation and hematology instruments			C		
	25.0.11.2	Check reagents of coagulation and hematology instruments			C		
	25.0.11.3	Check maintenance of coagulation and hematology instruments			C		
	25.0.11.4	Record maintenance of all instruments			C		
	25.0.11.5	Perform manufacturer-specific quality control test procedures			C		
	25.0.11.6	Label reagents			C		
	25.0.11.7	Inspect reagents			C		
	25.0.11.8	Prepare reagents			C		

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Unit: 26. Clinical Chemistry			10	12	AD	LL	WS
Competency	**26.0.1**	**Use terminology related to clinical chemistry**		I	C		
Builders:	26.0.1.1	Define clinical chemistry terms		I	C		
	26.0.1.2	Spell clinical chemistry terms		I	C		
	26.0.1.3	Identify the designations used for weights and measures		I	C		
	26.0.1.4	Use the abbreviations for weights and measures		I	C		
Competency	**26.0.2**	**Prepare solutions**		I	C		
Builders:	26.0.2.1	Prepare molar solutions		I	C		
	26.0.2.2	Prepare normal solutions		I	C		
	26.0.2.3	Prepare percentage solutions (w/w, w/v, v/v)		I	C		
Competency	**26.0.3**	**Perform kidney function and clearance tests**			C		
Builders:	26.0.3.1	Explain kidney function tests		I	C		
	26.0.3.2	Perform kidney function tests (e.g., creatinine)			C		
	26.0.3.3	Explain kidney clearance tests			C		
	26.0.3.4	Perform kidney clearance tests (e.g., creatinine clearance)			C		
	26.0.3.5	List the normal values of kidney function tests			C		
	26.0.3.6	Calculate kidney function tests			C		
	26.0.3.7	Identify kidney related pathologies (e.g., renal failure)		I	C		

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Unit: 26. Clinical Chemistry (continued)	10	12	AD	LL	WS
Competency 26.0.4 **Perform liver function tests**			C		
Builders: 26.0.4.1 Identify liver function tests			C		
26.0.4.2 Perform liver function tests			C		
26.0.4.3 Identify tests that are elevated in liver disease			C		
26.0.4.4 Identify liver enzymes and isoenzymes			C		
26.0.4.5 List normal values of liver function tests			C		
26.0.4.6 Identify abnormal values			C		
26.0.4.7 Identify liver related pathologies (e.g., cirrhosis)			C		
Competency 26.0.5 **Perform glucose tests**		I	C		
Builders: 26.0.5.1 Define terminology related to carbohydrates		I	C		
26.0.5.2 List the uses of carbohydrates by the body		I	C		
26.0.5.3 Describe the tests for all carbohydrates and reducing substances			C		
26.0.5.4 Describe the true glucose tests (glucose specific)			C		
26.0.5.5 Perform blood tests for glucose*		I	C		
26.0.5.6 Perform urine tests for glucose		I	C		
26.0.5.7 Perform spinal fluid tests for glucose			C		
26.0.5.8 Perform oral glucose tolerance test			C		
26.0.5.9 Differentiate among a normal glucose tolerance curve, a diabetic glucose tolerance curve, and a hypoglycemia curve (or flat curve)			C		
26.0.5.10 Identify normal values		I	C		
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***Unit: 26. Clinical Chemistry** (continued)*	10	12	AD	LL	WS
Competency 26.0.6 Perform electrolytes tests		I	C		
Builders: 26.0.6.1 Define cations and anions		I	C		
26.0.6.2 Explain electrolyte balance		I	C		
26.0.6.3 Define extracellular cations and anions		I	C		
26.0.6.4 Define intracellular cations and anions		I	C		
26.0.6.5 List the normal values of cations and anions			C		
26.0.6.6 Perform tests for anions and cations			C		
26.0.6.7 List abnormal values			C		
26.0.6.8 Calculate anion gap			C		
26.0.6.9 Explain methods of electrolyte testing			C		

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Unit: 26. Clinical Chemistry (continued)			10	12	AD	LL	WS
Competency	**26.0.7**	**Perform protein tests**			C		
Builders:	26.0.7.1	List functions of proteins			C		
	26.0.7.2	List what makes up a total protein			C		
	26.0.7.3	Explain the A/G ratio			C		
	26.0.7.4	List body constituents made up of protein (e.g., hemoglobin, fibrinogen, enzymes)			C		
	26.0.7.5	Explain the various methods of total protein analysis			C		
	26.0.7.6	List normal values of total protein analysis			C		
	26.0.7.7	Explain the principles of total protein analysis tests			C		
	26.0.7.8	Explain the various methods of albumin analysis			C		
	26.0.7.9	List the normal values of albumin analysis			C		
	26.0.7.10	Explain the principles of albumin analysis tests			C		
	26.0.7.11	Explain the various methods of globulin analysis			C		
	26.0.7.12	List the normal values of globulin analysis			C		
	26.0.7.13	Explain the principles of globulin analysis tests			C		
	26.0.7.14	Explain the principle of protein electrophoresis			C		
	26.0.7.15	Explain the various procedures for protein electrophoresis			C		
	26.0.7.16	Describe the proper migration pattern of the plasma proteins			C		
	26.0.7.17	Identify electrophoretic patterns in disease			C		
	26.0.7.18	Perform various methods for protein tests			C		
Competency	**26.0.8**	**Perform carbon dioxide tests**			C		
Builders:	26.0.8.1	Explain different carbon dioxide tests			C		
	26.0.8.2	Perform different carbon dioxide tests			C		
	26.0.8.3	Identify normal values of carbon dioxide tests			C		
	26.0.8.4	Identify abnormal values			C		

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Unit: 26. Clinical Chemistry *(continued)*	10	12	AD	LL	WS
Competency 26.0.9 Perform blood gas tests			C	√	
Builders: 26.0.9.1 List normal blood gas values			C	√	
26.0.9.2 Explain the various methods of blood gas analysis			C	√	
26.0.9.3 Perform blood gas analysis			C	√	
26.0.9.4 Identify abnormal values			C	√	
26.0.9.5 Identify respiration acidosis/alkalosis			C	√	
26.0.9.6 Identify metabolic acidosis/alkalosis			C	√	
Competency 26.0.10 Explain mineral metabolism			C	√	
Builders: 26.0.10.1 List the minerals of the body			C	√	
26.0.10.2 Describe mineral metabolism			C	√	
26.0.10.3 List normal values			C	√	
26.0.10.4 List abnormal values			C	√	
26.0.10.5 Perform mineral analysis			C	√	
Competency 26.0.11 Perform enzyme analysis			C	√	
Builders: 26.0.11.1 Describe methods of enzyme analysis			C	√	
26.0.11.2 List the enzymes of the pancreas and their functions			C	√	
26.0.11.3 Describe the tests used to determine pancreatic enzyme activities			C	√	
26.0.11.4 List the enzymes and isoenzymes of the heart and their functions			C	√	
26.0.11.5 List the order in which enzymes and/or isoenzymes of the heart rise and return to normal			C	√	
26.0.11.6 Explain LDH1:2 flip			C	√	
26.0.11.7 Explain the use of acid phosphatase			C	√	
26.0.11.8 Perform various enzyme analysis tests			C	√	
26.0.11.9 List normal ranges			C	√	

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Unit: 26. Clinical Chemistry (continued)			10	12	AD	LL	WS
Competency	**26.0.12**	**Perform thyroid gland tests**			C	✓	
Builders:	26.0.12.1	Explain the function of the thyroid gland			C	✓	
	26.0.12.2	Explain various thyroid function tests			C	✓	
	26.0.12.3	Perform thyroid function tests			C	✓	
	26.0.12.4	List normal values of thyroid function tests			C	✓	
	26.0.12.5	Identify thyroid related pathologies (e.g., hypothyroid disease)			C	✓	
Competency	**26.0.13**	**Perform miscellaneous tests**			C	✓	
Builders:	26.0.13.1	Perform therapeutic drug monitoring			C	✓	
	26.0.13.2	Perform drug screen testing			C	✓	
	26.0.13.3	Identify therapeutic values			C	✓	
Competency	**26.0.14**	**Perform lipid tests**			C	✓	
Builders:	26.0.14.1	Explain principles of lipid metabolism		I	C	✓	
	26.0.14.2	Perform tests for HDL, LDL, ULDL, cholesterol, triglyceride, and other lipids			C	✓	
	26.0.14.3	Perform lipid calculations			C	✓	
	26.0.14.4	Identify lipidemias			C	✓	
	26.0.14.5	List normal values			C	✓	

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***Unit: 26. Clinical Chemistry** (continued)*			10	12	AD	LL	WS
Competency	**26.0.15**	**Use laboratory instruments**		I	I	√	√
Builders:	26.0.15.1	List the parts of the spectrophotometer and their functions		I	C	√	√
	26.0.15.2	Explain the principle of the spectrophotometer		I	C	√	√
	26.0.15.3	Use a spectrophotometer		I	C	√	√
	26.0.15.4	Define terminology related to light and wavelengths		I	C	√	√
	26.0.15.5	Calibrate a spectrophotometer			C	√	√
	26.0.15.6	List the parts of an atomic absorption spectrophotometer and their functions			I	√	√
	26.0.15.7	Explain the principle of the atomic absorption spectrophotometer			C	√	√
	26.0.15.8	List the uses of the atomic absorption spectrophotometer			I	√	√
	26.0.15.9	Use an atomic absorption spectrophotometer			I	√	√
	26.0.15.10	List the parts of the fluorescence spectrophotometer and their functions			I	√	√
	26.0.15.11	Explain the principle of the fluorescence spectrophotometer			C	√	√
	26.0.15.12	List the tests performed on the fluorescence spectrophotometer			I	√	√
	26.0.15.13	Use a fluorescence spectrophotometer			I	√	√
	26.0.15.14	List the parts of continuous flow analysis and their functions			I	√	√
	26.0.15.15	Perform continuous flow analysis			I	√	√
	26.0.15.16	List the instruments that perform discrete analysis, the parts related to them, and their functions			C	√	√
	26.0.15.17	Use discrete analysis instruments			C	√	√
	26.0.15.18	List the parts of a random access analyzer and their functions			I	√	√
	26.0.15.19	Explain the principle of the random analyzer			C	√	√
	26.0.15.20	List the chemicals that are analyzed by a random analyzer			C	√	√
	26.0.15.21	Use a random analyzer			C	√	√
	26.0.15.22	List the parts of a radioimmunoassay (RIA) analyzer and their functions			C	√	√
	26.0.15.23	Explain the principle of an RIA analyzer			C	√	√

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Unit: 26. Clinical Chemistry (continued)	10	12	AD	LL	WS
Competency 26.0.15 **Use laboratory instruments** *(continued)*			I	√	√
Builders: 26.0.15.24 List the chemicals that are analyzed by an RIA analyzer			C	√	√
26.0.15.25 Use an RIA analyzer			I	√	√
26.0.15.26 List the parts of an enzyme immunoassay (EIA) analyzer and their functions			C	√	√
26.0.15.27 Explain the principle of an EIA analyzer			C	√	√
26.0.15.28 List the chemicals that are analyzed by an EIA analyzer			C	√	√
26.0.15.29 Use an EIA analyzer			C	√	√
26.0.15.30 List the parts of a nephelometer analyzer and their functions			I	√	√
26.0.15.31 Explain the principle of a nephelometer analyzer			C	√	√
26.0.15.32 List the chemicals that are analyzed by nephelometer analyzer			C	√	√
26.0.15.33 Use a nephelometer analyzer			I	√	√
26.0.15.34 List the parts of an osmometer analyzer and their functions			C	√	√
26.0.15.35 Explain the principle of an osmometer analyzer			C	√	√
26.0.15.36 List the chemicals that are analyzed by an osmometer analyzer			C	√	√
26.0.15.37 Use an osmometer analyzer			C	√	√
26.0.15.38 List the parts of an ultraviolet spectrophotometer analyzer and their functions			C	√	√
26.0.15.39 Explain the principle of an ultraviolet spectrophotometer analyzer			C	√	√
26.0.15.40 List the chemicals that are analyzed by an ultraviolet spectrophotometer analyzer			C	√	√
26.0.15.41 Use an ultraviolet spectrophotometer analyzer			C	√	√
26.0.15.42 List the parts of a fluorescence polarization immunoassay (FPIS) analyzer and their functions			C	√	√
26.0.15.43 Explain the principle of an FPIS analyzer			C	√	√
26.0.15.44 List the chemicals that are analyzed by an FPIS analyzer			C	√	√

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***Unit: 26. Clinical Chemistry** (continued)*			10	12	AD	LL	WS
Competency	**26.0.15**	**Use laboratory instruments** *(continued)*			I	✓	✓
Builders:	26.0.15.45	Use an FPIS analyzer			C	✓	✓
	26.0.15.46	Use other laboratory instruments (e.g., balance, pH meter, refractometer, blood gas apparatus, electrophoresis apparatus, automatic pipette)			C	✓	✓
Competency	**26.0.16**	**Maintain laboratory instruments**		I	C		
Builders:	26.0.16.1	Maintain chemical analyzers			C		
	26.0.16.2	Maintain other laboratory instruments (e.g., balance, pH meter, refractometer, blood gas apparatus, electrophoresis apparatus, automatic pipette)			C		
	26.0.16.3	Clean glassware and pipettes		I	C		
	26.0.16.4	Maintain glassware and pipettes		I	C		
	26.0.16.5	Record all maintenance performed		I	C		

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Unit: 27. Immunohematology	10	12	AD	LL	WS
Competency 27.0.1 Use terminology related to immunohematology			C		
Builders: 27.0.1.1 Define immunohematology-related terminology			C		
27.0.1.2 Spell immunohematology-related terminology			C		
27.0.1.3 Identify blood components			C		
Competency 27.0.2 Describe antibodies			C		
Builders: 27.0.2.1 List the five major immunoglobulins			C		
27.0.2.2 List the immunoglobulins or antibodies that are important in the ABO and Rh systems			C		
27.0.2.3 List the natural antibodies and their functions			C		
27.0.2.4 List the 7S and 19S antibodies and their functions			C		
27.0.2.5 Explain the function of bivalent or complete antibodies			C		
27.0.2.6 Explain the function of univalent, incomplete, or blocking antibodies			C		
27.0.2.7 Explain Zeta potential			C		
27.0.2.8 Describe how the anti-human globulin helps in detecting the blocking, univalent, or incomplete antibody			C		
27.0.2.9 Explain how anti-human globulin (Coombs) is produced			C		
Competency 27.0.3 Explain antigens and antibodies			C		
Builders: 27.0.3.1 Explain the principle of antigen-antibody reactions		I	C		
27.0.3.2 Describe the history of the ABO system and the Rh system			C		
27.0.3.3 Chart the chemical structure of the H, A, and B antigens			C		
27.0.3.4 Describe the antigens of the ABO system			C		
27.0.3.5 Describe the antibodies of the ABO system			C		
27.0.3.6 List the phenotypes and genotypes of the Rho(D) system			C		
27.0.3.7 Explain the genetics of blood group antigen			C		
27.0.3.8 Describe additional antigen systems (e.g., M&N, Duffy, Lewis, Kell, etc.)			C		

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***Unit: 27. Immunohematology** (continued)*			10	12	AD	LL	WS
Competency	**27.0.4**	**Describe subgroups of A**			C		
Builders:	27.0.4.1	List the subgroups of A			C		
	27.0.4.2	Describe how subgroups of A are tested			C		
Competency	**27.0.5**	**Describe enzyme tests**			C		
Builders:	27.0.5.1	List the enzyme tests that are used in immunohematology			C		
	27.0.5.2	Differentiate the purposes and methods of enzyme tests used in immunohematology			C		
Competency	**27.0.6**	**Describe Rh nomenclatures**			C		
Builders:	27.0.6.1	Explain Fisher-Race nomenclature			C		
	27.0.6.2	Explain Wiener nomenclature			C		
	27.0.6.3	Explain Rosenfeld nomenclature			C		
	27.0.6.4	Compare Fisher-Race, Wiener, and Rosenfeld nomenclatures			C		
Competency	**27.0.7**	**Perform Du test**			C		
Builders:	27.0.7.1	Perform Du test in Rh typing			C		
	27.0.7.2	Perform Du test to choose donors for transfusions			C		
	27.0.7.3	Perform Du test for blood recipients			C		

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Unit: *27.* ***Immunohematology*** *(continued)*			10	12	AD	LL	WS
Competency	**27.0.8**	**Type blood**			C		
Builders:	27.0.8.1	Perform direct or forward blood group slide and tube method			C		
	27.0.8.2	Perform reverse typing			C		
	27.0.8.3	Perform Rho(D) typing–slide and tube			C		
	27.0.8.4	Perform typing for subgroups of A			C		
	27.0.8.5	Perform genotyping			C		
	27.0.8.6	Explain the principle of the antiglobulin (Coombs) test			C		
	27.0.8.7	Explain the principle of the indirect antiglobulin (indirect Coombs) test			C		
	27.0.8.8	Perform indirect antiglobulin test			C		
	27.0.8.9	Interpret indirect antiglobulin test			C		
	27.0.8.10	List the uses of the indirect antiglobulin test			C		
	27.0.8.11	Perform direct antiglobulin test (Coombs)			C		
	27.0.8.12	Interpret direct antiglobulin test			C		
	27.0.8.13	List uses of direct antiglobulin test			C		
	27.0.8.14	List drugs responsible for red blood cell sensitization that cause a positive direct antiglobulin test			C		
	27.0.8.15	Perform direct antiglobulin profile			C		
	27.0.8.16	Interpret the direct antiglobulin profile			C		

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Unit: 27. Immunohematology (continued)			10	12	AD	LL	WS
Competency	**27.0.9**	**Crossmatch blood**			C		
Builders:	27.0.9.1	Explain the principle of the crossmatch procedure			C		
	27.0.9.2	Perform crossmatch procedure (anti-human globulin crossmatch)			C		
	27.0.9.3	Interpret results of crossmatch procedure			C		
	27.0.9.4	List reasons for autocontrol on crossmatch test			C		
	27.0.9.5	Perform autocontrol test with crossmatch			C		
	27.0.9.6	Explain reasons for using Coombs control test			C		
	27.0.9.7	Perform Coombs control test			C		
	27.0.9.8	List errors that can occur in the crossmatch procedure (e.g., overmixing after centrifugation, improper washing of Coombs tube before addition of Coombs serum)			C		
	27.0.9.9	Identify incompatible crossmatch			C		
	27.0.9.10	Perform follow-up procedures for incompatibility			C		
Competency	**27.0.10**	**Use Rho(d) immune globulin criteria**			C		
Builders:	27.0.10.1	Explain the principle of the Rho(D) immune globulin			C		
	27.0.10.2	List to whom Rho(D) immune globulin should be given			C		
	27.0.10.3	List indications as to when Rho(D) should be given			C		
	27.0.10.4	List the criteria used to declare patients candidates for receiving Rho(D) immune globulin			C		
Competency	**27.0.11**	**Detect cold agglutinins**			C		√
Builders:	27.0.11.1	Define cold agglutinins			C		√
	27.0.11.2	Perform tests to detect cold agglutinins			C		√
	27.0.11.3	Eliminate cold agglutinins when they interfere with blood grouping and/or crossmatching of blood			C		√

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Unit: 27. Immunohematology (continued)	10	12	AD	LL	WS
Competency 27.0.12 **Elute antibodies**			C		✓
Builders: 27.0.12.1 Use heat elution to elute antibodies from red blood cells			C		✓
27.0.12.2 Use freeze elution to elute antibodies from red blood cells			C		✓
27.0.12.3 Use acid elution to elute antibodies from red blood cells			C		✓
Competency 27.0.13 **Evaluate blood donor requirements**		I	C		
Builders: 27.0.13.1 Explain various physical criteria		I	C		
27.0.13.2 Explain medical history criteria		I	C		
Competency 27.0.14 **Operate blood bank**			C		✓
Builders: 27.0.14.1 Visibly inspect units of blood			C		✓
27.0.14.2 Dispose of blood bags and patient samples			C		✓
27.0.14.3 Store blood and blood products for transfusion			C		✓
27.0.14.4 Investigate transfusion reactions			C		✓
27.0.14.5 Investigate hemolytic diseases in newborn			C		✓
27.0.14.6 Describe the uses of blood components			C		✓
27.0.14.7 Prepare blood for storage			C		✓
27.0.14.8 Perform quality control on all reagents			C		✓
27.0.14.9 Record all quality control procedures			C		✓
27.0.14.10 Check label to verify blood type			C		✓
27.0.14.11 Identify patient specimen properly			C		✓
27.0.14.12 Follow American Association of Blood Bank (AABB) protocols			C		✓

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Unit: 28. Immunology and Serology			**10**	**12**	**AD**	**LL**	**WS**
Competency	**28.0.1**	**Use immunology and serology terminology**			C	√	
Builders:	28.0.1.1	Define terminology related to immunology and serology			C	√	
	28.0.1.2	Spell terminology related to immunology and serology			C	√	
Competency	**28.0.2**	**Perform immunologic testing**			C	√	
Builders:	28.0.2.1	Explain the principle of immunologic testing			C	√	
	28.0.2.2	Identify antigen-antibody reaction			C	√	
	28.0.2.3	Describe the relationship of T and B cells to antibody production			C	√	
Competency	**28.0.3**	**Perform RPR tests**			C		
Builders:	28.0.3.1	Perform qualitative RPR			C		
	28.0.3.2	Perform quantitative RPR			C		
	28.0.3.3	Perform fundamentals of complement-fixation tests			C		
	28.0.3.4	Perform quality control procedures for all immunologic tests			C		

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***Unit: 28. Immunology and Serology** (continued)*			10	12	AD	LL	WS
Competency	**28.0.4**	**Perform immunologic and serologic procedures**			C	√	√
Builders:	28.0.4.1	Explain theory of C-reactive protein (CRP)			C	√	√
	28.0.4.2	Perform CRP			C	√	√
	28.0.4.3	Explain theory of anti-Streptolysin screen and titer (ASO)			C	√	√
	28.0.4.4	Perform ASO			C	√	√
	28.0.4.5	Explain theory of heterophile agglutination			C	√	√
	28.0.4.6	Perform heterophile quantitative with sheep cells, guinea pig, and horse serum absorption			C	√	√
	28.0.4.7	Perform heterophile qualitative with latex agglutination or blood cell agglutination tests			C	√	√
	28.0.4.8	Perform rheumatoid arthritis tests (latex agglutination)			C	√	√
	28.0.4.9	Perform systemic lupus erythematosis (SLE or LE agglutination) tests			C	√	√
	28.0.4.10	Perform red cell fragility (osmotic fragility) tests			C	√	√
	28.0.4.11	Perform anti-nuclear antibody tests			C	√	√
	28.0.4.12	Perform fluorescent antibody procedures			C	√	√
	28.0.4.13	Explain principles of test for radial immunodiffusion (RID)			C	√	√
	28.0.4.14	Perform the test for RID			C	√	√
	28.0.4.15	Perform serum pregnancy test (HCG)			C	√	√
	28.0.4.16	Perform tests for hepatitis			C	√	√
	28.0.4.17	Perform febrile agglutination tests			C	√	√
	28.0.4.18	Perform monospot test			C	√	√
Competency	**28.0.5**	**Explain tests for other viruses**			I	√	√
Builders:	28.0.5.1	Explain test for cytomegalovirus			I	√	√
	28.0.5.2	Explain test for retrovirus			I	√	√
	28.0.5.3	Explain test for Epstein-Barr virus			I	√	√
	28.0.5.4	Explain test for acquired immune deficiency syndrome (AIDS)			I	√	√

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Unit: 29. Bacteriology			10	12	AD	LL	WS
Competency	**29.0.1**	**Use terminology related to bacteriology**	I	R	C		
Builders:	29.0.1.1	Define terms related to bacteriology	I	R	C		
	29.0.1.2	Spell terms related to bacteriology	I	R	C		
	29.0.1.3	Identify types of bacteria by shapes	I	R	C		
	29.0.1.4	Describe the growth curve of bacteria	I	R	C		
Competency	**29.0.2**	**Identify types and uses of culture media**		I	C		
Builders:	29.0.2.1	Identify the different culture medias		I	C		
	29.0.2.2	List the uses of the different culture medias		I	C		
Competency	**29.0.3**	**Culture specimens**			C		
Builders:	29.0.3.1	Select appropriate culture media			C		
	29.0.3.2	Use concentration methods for sputum specimens to be cultured for acid-fast bacilli			C		
	29.0.3.3	Culture sputums for acid-fast bacilli			C		
	29.0.3.4	Examine smears for acid-fast bacilli			C		
	29.0.3.5	Type cultures using type-specific typing sera			C		
	29.0.3.6	Perform proper plating techniques		I	C		
Competency	**29.0.4**	**Stain smears**		I	C		
Builders:	29.0.4.1	Explain Gram staining procedure		I	C		
	29.0.4.2	Perform a Gram stain		I	C		
	29.0.4.3	Explain staining procedures (i.e., Gram's, hot and cold acid-fast, Giemsa and Wright's, Albert's, negative or relief, spore, capsule, flagella, India ink, fluorescent, and methylene blue)			C		
	29.0.4.4	Prepare stains (i.e., Gram's, hot and cold acid-fast, Giemsa and Wright's, Albert's, negative or relief, spore, capsule, flagella, India ink, fluorescent, and methylene blue)			C		
	29.0.4.5	Describe uses of different stains (i.e., Gram's, hot and cold acid-fast, Giemsa and Wright's, Albert's, negative or relief, spore, capsule, flagella, India ink, fluorescent, and methylene blue)			C		

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Unit: 29. Bacteriology (continued)	10	12	AD	LL	WS
Competency 29.0.5 Perform differentiating tests			C		
Builders: 29.0.5.1 Perform coagulase test			C		
29.0.5.2 Perform bile exculin (aesculin) test			C		
29.0.5.3 Perform bile solubility test			C		
29.0.5.4 Perform catalase test			C		
29.0.5.5 Perform oxidase test			C		
29.0.5.6 Perform optochin disc (P disc) test			C		
29.0.5.7 Perform bacitracin disc (A disc) test			C		
29.0.5.8 Perform beta lactam disc test			C		
Competency 29.0.6 Identify gram-positive cocci			C	√	
Builders: 29.0.6.1 Isolate gram-positive cocci			C	√	
29.0.6.2 Identify gram-positive cocci			C	√	
29.0.6.3 Differentiate one gram-positive cocci from another			C	√	
29.0.6.4 Differentiate normal/pathologic flora			C	√	
Competency 29.0.7 Identify gram-positive bacilli			C	√	
Builders: 29.0.7.1 Isolate gram-positive bacilli			C	√	
29.0.7.2 Identify gram-positive bacilli			C	√	
29.0.7.3 Differentiate one gram-positive bacilli from another			C	√	
29.0.7.4 Differentiate normal/pathologic flora			C	√	

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Unit:* *29.* *Bacteriology* *(continued)			10	12	AD	LL	WS
Competency	**29.0.8**	**Identify gram-negative cocci**			C	√	
Builders:	29.0.8.1	Isolate gram-negative cocci			C	√	
	29.0.8.2	Identify gram-negative cocci			C	√	
	29.0.8.3	Differentiate one gram-negative cocci from another			C	√	
	29.0.8.4	Differentiate normal/pathologic flora			C	√	
Competency	**29.0.9**	**Identify gram-negative Enterobactereaceae**			C	√	
Builders:	29.0.9.1	Isolate gram-negative Enterobactereaceae			C	√	
	29.0.9.2	Identify gram-negative Enterobactereaceae			C	√	
	29.0.9.3	Differentiate genera and species			C	√	
	29.0.9.4	Differentiate normal/pathologic flora			C	√	
Competency	**29.0.10**	**Identify gram-negative bacilli**			C	√	
Builders:	29.0.10.1	Isolate nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli (i.e., Pseudomonas, Bordetella, Hemophilis, Brucella, and Campylobacter)			C	√	
	29.0.10.2	Identify nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli (i.e., Pseudomonas, Bordetella, Hemophilis, Brucella, and Campylobacter)			C	√	
	29.0.10.3	Differentiate nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli (i.e., Pseudomonas, Bordetella, Hemophilis, Brucella, and Campylobacter)			C	√	
	29.0.10.4	Differentiate normal/pathologic flora			C	√	
Competency	**29.0.11**	**Perform antimicrobial sensitivity testing**			C	√	
Builders:	29.0.11.1	Use Kirby-Bauer system			C	√	
	29.0.11.2	Use MIC system			C	√	
	29.0.11.3	Use automated system			C	√	

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Unit:* 29. *Bacteriology* *(continued)			**10**	**12**	**AD**	**LL**	**WS**
Competency	**29.0.12**	**Use bacterial identification systems**			C	√	
Builders:	29.0.12.1	Describe systems for bacterial identification (i.e., API, enterotube, automated systems, biochemical, and carbohydrate systems)			C	√	
	29.0.12.2	Perform bacterial identification using biochemical and carbohydrate system			C	√	
	29.0.12.3	Perform group typing of bacterial growth			C	√	
	29.0.12.4	Perform antigen detection of organism in spinal fluid (e.g., Dimetogen test and Bactogen test)			C	√	
Competency	**29.0.13**	**Perform routine mycology procedures**			C	√	
Builders:	29.0.13.1	Perform KOH preparation			C	√	
	29.0.13.2	Perform methylene blue staining			C	√	
	29.0.13.3	Perform lacto-phenol cotton blue staining			C	√	
	29.0.13.4	Perform culture using Sabaroud agar			C	√	
	29.0.13.5	Use germ tube			C	√	
	29.0.13.6	Use cornmeal agar			C	√	
	29.0.13.7	Perform India ink preparation			C	√	
Competency	**29.0.14**	**Perform special tests**		I	C	√	
Builders:	29.0.14.1	Perform group A streptococci rapid enzyme immunoassay test (or other detection kits) from throat swabs		I	C	√	
	29.0.14.2	Perform group A streptococci cultures for beta hemolysis screening			C	√	
	29.0.14.3	Perform clostridium difficile toxin test			C	√	

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Unit: 30. Parasitology			10	12	AD	LL	WS
Competency	**30.0.1**	**Use parasitology-related terminology**		I	C		
Builders:	30.0.1.1	Define terminology related to parasitology		I	C		
	30.0.1.2	Spell terminology related to parasitology		I	C		
	30.0.1.3	List types of parasites (i.e., protozoa, helminthes)		I	C		
	30.0.1.4	Describe types of parasites		I	C		
	30.0.1.5	Classify parasites		I	C		
Competency	**30.0.2**	**Perform examinations for parasites**			C		
Builders:	30.0.2.1	Examine feces for parasites (i.e., macroscopic examination, microscopic direct saline and iodine preparations, and various concentration methods)			C		
	30.0.2.2	Examine blood, urine and other body fluids for parasites			C		
	30.0.2.3	Examine tissue for parasites			C		
	30.0.2.4	Perform direct method examination for intestinal parasites (i.e., protozoa, trematodes, cestodes, nematodes)			C		
	30.0.2.5	Perform concentration method examination for intestinal parasites (i.e., protozoa, trematodes, cestodes, nematodes)			C		
Competency	**30.0.3**	**Perform tests for blood parasites**			C		
Builders:	30.0.3.1	Perform test for malaria			C		
	30.0.3.2	Perform test for filaria			C		
	30.0.3.3	Perform test for trypanosomes			C		

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Unit: 30. Parasitology *(continued)*			10	12	AD	LL	WS
Competency	**30.0.4**	**Perform tests for fats and occult blood**		I	C		
Builders:	30.0.4.1	Prepare Sudan IV stain for fats			C		
	30.0.4.2	Examine stool for fats			C		
	30.0.4.3	Perform test for occult blood in stool (e.g., Hemocult)		I	C		
Competency	**30.0.5**	**Stain for ova and parasites**			C		
Builders:	30.0.5.1	Prepare permanent smears for ova and parasites			C		
	30.0.5.2	Stain permanent smears for ova and parasites using iron hematoxylin method			C		
	30.0.5.3	Stain permanent smears for ova and parasites using trichrome method			C		
	30.0.5.4	Describe the defining characteristics of the cryptosporidium species			C		
	30.0.5.5	Identify cryptosporidium			C		
	30.0.5.6	Stain cryptosporidium			C		

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Unit: 31. Urinalysis		10	12	AD	LL	WS
Competency 31.0.1	**Use terminology related to urinalysis**		I	C		
Builders: 31.0.1.1	Define terminology related to urinalysis		I	C		
31.0.1.2	Spell terminology related to urinalysis		I	C		
Competency 31.0.2	**Identify properties of urine**		I	C		
Builders: 31.0.2.1	Explain the formation of urine		I	C		
31.0.2.2	Describe the anatomy of the kidney		I	C		
31.0.2.3	Identify the physical properties of urine		I	C		
31.0.2.4	Identify the chemical properties of urine		I	C		
31.0.2.5	Identify the microscopic structures found in urine			C		
Competency 31.0.3	**Explain principles of urine tests**		I	C		
Builders: 31.0.3.1	Explain the role of specific gravity in urine tests		I	C		
31.0.3.2	Explain the role of pH in urine tests		I	C		
31.0.3.3	Explain the role of protein in urine tests		I	C		
31.0.3.4	Explain the role of glucose in urine tests		I	C		
31.0.3.5	Explain the role of ketones in urine tests		I	C		
31.0.3.6	Explain the role of occult blood in urine tests		I	C		
31.0.3.7	Explain the role of nitrate in urine tests		I	C		
31.0.3.8	Explain the role of bilirubin in urine tests		I	C		
31.0.3.9	Explain the role of urobilinogen in urine tests		I	C		
31.0.3.10	Explain the role of leukocyte esterase in urine tests		I	C		
Competency 31.0.4	**Perform routine urinalysis and urine diagnostics**		I	C		
Builders: 31.0.4.1	Perform complete urinalysis (e.g., dipstick, microscopic)		I	C		
31.0.4.2	Perform tests for pregnancy			C		

Key: 10 = by the end of grade 10
12 = by the end of grade 12
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Unit: 31. Urinalysis (continued)			10	12	AD	LL	WS
Competency	**31.0.5**	**Perform special tests**		I	C		
Builders:	31.0.5.1	Perform Ictotest™ (Ames) for bilirubin			C		
	31.0.5.2	Perform sulfosalicylic acid test for protein			C		
	31.0.5.3	Perform test for acetone		I	C		
	31.0.5.4	Perform Bence Jones protein test			C		
	31.0.5.5	Perform tests for reducing substances			C		
Competency	**31.0.6**	**Identify cells found in urine**			C		
Builders:	31.0.6.1	List blood cells found in urine			C		
	31.0.6.2	Describe blood cells found in urine			C		
	31.0.6.3	List types of epithelial cells found in urine			C		
	31.0.6.4	Describe types of epithelial cells found in urine			C		
	31.0.6.5	Explain the cause of each type of cell appearing in urine			C		
Competency	**31.0.7**	**Identify casts found in urine**			C		
Builders:	31.0.7.1	Describe casts found in urine			C		
	31.0.7.2	Explain how casts are formed			C		
	31.0.7.3	Explain where casts are formed			C		
	31.0.7.4	Describe the pathological condition related to each type of cast			C		

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Unit: 31. Urinalysis (continued)	10	12	AD	LL	WS
Competency 31.0.8 Identify foreign matter found in urine			C		
Builders: 31.0.8.1 Describe types of pathological/common crystals found in urine			C		
31.0.8.2 Identify mucus found in urine			C		
31.0.8.3 Explain the significance of mucus found in urine			C		
31.0.8.4 Identify parasites found in urine			C		
31.0.8.5 Explain the significance of parasites found in urine			C		
31.0.8.6 Identify spermatozoa in urine			C		
31.0.8.7 Explain the significance of spermatozoa in urine			C		
31.0.8.8 Identify bacteria found in urine			C		
31.0.8.9 Explain the significance of bacteria found in urine			C		
31.0.8.10 Identify cylindroids found in urine			C		
31.0.8.11 Explain the significance of cylindroids in urine			C		
31.0.8.12 Identify yeast found in urine			C		
31.0.8.13 Explain the significance of yeast found in urine			C		
31.0.8.14 Identify amorphous material found in urine			C		
31.0.8.15 Explain the significance of amorphous material found in urine			C		

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Health Technologies Cluster Tech-Prep Competency Profile Matrix

(Shaded areas indicate core units.)

RAD = Radiographer
RCT = Respiratory Care Therapist
OTA = Occupational Therapy Assistant
PTA = Physical Therapist Assistant
RNA = Registered Nurse (Associate Degree)
PHT = Pharmacy Technologist
MLT = Medical Laboratory Technician
HIS = Histotechnologist
EMT = Emergency Medical Technician
DHY = Dental Hygienist
DLT = Dental Laboratory Technician
HIT = Health Information Technician

UNIT	RAD	RCT	OTA	PTA	RNA	PHT	MLT	HIS	EMT	DHY	DLT	HIT
Communications Literacy	X	X	X	X	X	X	X	X	X	X	X	X
Mathematics Literacy	X	X	X	X	X	X	X	X	X	X	X	X
Science Literacy	X	X	X	X	X	X	X	X	X	X	X	X
Technology Literacy	X	X	X	X	X	X	X	X	X	X	X	X
Employability Skills	X	X	X	X	X	X	X	X	X	X	X	X
Professionalism	X	X	X	X	X	X	X	X	X	X	X	X
Teamwork	X	X	X	X	X	X	X	X	X	X	X	X
Computer Literacy	X	X	X	X	X	X	X	X	X	X	X	X
Documentation	X	X	X	X	X	X	X	X	X	X	X	X
Infection Control and Risk Management	X	X	X	X	X	X	X	X	X	X	X	X
Medical Terminology	X	X	X	X	X	X	X	X	X	X	X	X
Anatomy, Physiology, and Pathology	X	X	X	X	X	X	X	X	X	X	X	X
Medical Law and Ethics	X	X	X	X	X	X	X	X	X	X	X	X
Psychology of Stress	X	X	X	X	X	X	X	X	X	X	X	X
Psychology of Human Relations	X	X	X	X	X	X	X	X	X	X	X	X
First Aid and Medical Emergencies	X	X	X	X	X	X	X	X	X	X	X	X
General Administrative Duties	X	X	X	X	X	X	X	X	X	X	X	X

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UNIT	RAD	RCT	OTA	PTA	RNA	PHT	MLT	HIS	EMT	DHY	DLT	HIT
Vital Signs	X	X	X	X	X		X		X	X		
Nutrition	X	X	X	X	X	X	X		X			
Basic Pharmacology	X	X			X		X		X	X		X
Patient Education	X	X	X	X	X	X	X					
Examinations	X	X			X				X			
Laboratory Tests and Diagnostic Procedures					X		X		X			
Radiography	X											
Respiratory Care		X										
Occupational Therapy			X									
Physical Therapy				X								
The Nursing Process					X							
Nursing Communication					X							
Nursing Clinical Procedures					X							
Advanced Nursing Concepts					X							
Medication Use					X	X						
Pharmacy Technology						X						

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UNIT	RAD	RCT	OTA	PTA	RNA	PHT	MLT	HIS	EMT	DHY	DLT	HIT
Clinical Chemistry							X					
Immunohematology							X					
Immunology and Serology							X					
Bacteriology							X					
Parasitology							X					
Urianalysis							X					
Hematology							X					
Histology								X				
Phlebotomy							X	X	X			
First Responder									X			
Emergency Medical Technology									X			
Emergency Medical Services									X			
Oral Anatomy and Pathology										X	X	
Chairside Procedures										X		
Dental Restoration											X	
Partial Denture Fabrication											X	
Orthodontics											X	

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UNIT	RAD	RCT	OTA	PTA	RNA	PHT	MLT	HIS	EMT	DHY	DLT	HIT
Extraoral and Interoral Exams										X		
Preventive Oral Hygiene Procedures										X		
Dental Morphology										X	X	
Dental Radiography										X		
Preventive Dental Assisting Procedures										X		
Dental Specialties										X		
Dental Materials I											X	
Dental Materials II											X	
Dental Laboratory Procedures											X	
Dental Hygiene										X		
Health Information Processing												X
Health Information Maintenance												X
Health Information Clerical Functions												X
Health Information Quality Control												X
Health Information Report Preparation												X
Health Information Supervision												X

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Occupational Definitions
Health Technologies Cluster

The following definitions broadly describe 12 occupations within the Health Technologies Cluster. While the definitions identify some technical skills necessary to gain employment at the technician level, the TCP Matrix offers a list of units needed for a Tech Prep program in one or more of the following occupations. Shaded units are considered core units within a program, whereas unshaded units may or may not be necessary for employment, depending upon labor market demands.

Radiographer—An individual who performs diagnostic examinations and administers therapeutic procedures using x-rays and related radiations, under the supervision of a radiologist. Technical skills should include, but not be limited to:
- conducting x-ray procedures
- equipment operation and maintenance
- evaluating radiographic images
- applying anatomy, physiology, positioning, and radiographic techniques
- determining exposure factors to achieve optimum radiographic results
- providing education related to radiologic procedures and safety
- monitoring quality assurance

Respiratory Care Therapist—An individual who performs therapeutic and life-support procedures using respiratory equipment under the supervision of a physician. Technical skills should include, but not be limited to:
- administering medications/oxygen via mist, mask, tent, or other procedures
- managing ventilators and other intensive care therapies
- emergency procedures and airway management
- equipment operation and maintenance
- storage and sterilization methods
- patient education
- medical ethics

Occupational Therapy Assistant—An individual who, under the guidance of registered occupational therapists, carries out treatment programs for many different kinds of patients. Technical skills should include, but not be limited to:
- planning and implementing activities and programs to improve sensory and motor functioning
- teaching skills, behaviors, and attitudes crucial to optimal performance
- designing, applying, recommending, and instructing patients in the use of orthodic or prosthetic devices
- selecting and adapting activities to prevent further disability
- equipment operation and maintenance
- maintaining patient records
- patient assessment

Physical Therapist Assistant—An individual who, under the supervision of a physical therapist, assist with patient examinations, treatment administration, and monitoring. Technical skills should include, but not be limited to:

- therapeutic exercises and massage
- heat, light, sound, water, and electrical modality treatments
- helping patient learn and improve functional activities in daily life
- fitting, adjusting, and training patient in the use and care of assistive devices
- observing patient during treatments and reporting progress to physical therapist
- demonstrating therapeutic exercises, modalities, and rehabilitation
- medical ethics

Registered Nurse—An individual who provides general nursing care to patients in hospital, nursing home, home health agency, doctor's office, etc. Technical skills should include, but not be limited to:

- administering medication and treatment prescribed by physician
- aiding physician during treatment and examination of patient
- observing patient and recording significant reactions to treatment
- assessing condition of patient
- documentation skills
- medical ethics
- infection control methods

Pharmacy Technologist—An individual who supports pharmacists by assisting during patient consultation, counter dispensing operations, and prescription preparation. Technical skills should include, but not be limited to:

- maintaining patient records
- setting up, packaging, and labeling medication dosages
- filling and dispensing routine orders for stock supplies and patient care areas
- maintaining inventory of drug supplies and parenteral fluids
- patient education
- medical ethics
- computer skills

Medical Laboratory Technician—An individual who performs general medical laboratory procedures and routines under the supervision of a physician or laboratory director. Technical skills should include, but not be limited to:

- laboratory instrument operation and maintenance
- principles of bacteriological, biological, and chemical test procedures
- medical laboratory safety procedures
- performing medical laboratory tests, procedures, experiments, and analyses
- chemical analyses of body fluids
- analyzing test results and enters findings in computer
- infection control methods

Histotechnologist—An individual who performs tests and analyses of patients' blood and tissue samples under the supervision of a pathologist. Technical skills should include, but not be limited to:

- medical laboratory procedures, specifically histology
- cutting of both frozen and paraffin embedded tissue, mounting and staining slides
- laboratory and chemical safety procedures
- information systems maintenance
- chemical and biological principles of tissue staining
- equipment operation and maintenance
- storage and sterilization methods

Emergency Medical Technician—An individual who performs initial medical diagnosis, treatment, and comprehensive care in medical crises. Technical skills should include, but not be limited to:

- disease, disorder, and injury symptomology
- emergency medical procedures
- equipment operation and maintenance
- basic pharmacology
- intravenous drug administration
- patient transportation
- disaster training

Dental Hygienist—An individual who practices the cleaning of teeth and related oral health therapies, either independently or in collaboration with dentists. Technical skills should include, but not be limited to:

- patient examination
- preventative oral health care
- oral health education
- dental hygiene therapy
- initial periodontal therapy
- dental radiography
- prosthetic cast creation

Dental Laboratory Technician—An individual who makes and repairs dental prostheses and restorative appliances as prescribed by a dentist. Technical skills should include, but not be limited to:

- preventative oral health care
- oral health education
- partial and complete denture construction
- crown and fixed bridge fabrication
- customized porcelain and acrylic restorations
- building orthodontic appliances
- cast metal partials

Health Information Technician—**An individual who classifies medical information and prepares patient records that are complete, accurate, and coded according to standard medical/health care classification systems. Technical skills should include, but not be limited to:**

- analysis of medical records
- accurate collection and preparation of statistical data
- coding of diseases, procedures, operations and therapies
- quality assurance management
- transcription of medical reports
- responsible release of information to insurance companies, law firms and government agencies
- maintenance and utilization of a variety of storage and retrieval systems
- processing, storage and retrieval of computerized health information

Essential Competencies

These units appear in each of the individual occupations as well as in the various cluster combinations. Individual unit content may vary slightly due to program emphasis, yet these competencies should be viewed as essential to success within Health Technologies.

Units:	Page
Communications Literacy	EC-2
Mathematics Literacy	EC-13
Science Literacy	EC-19
Technology Literacy	EC-30
Employability Skills	EC-31
Professionalism	EC-36
Teamwork	EC-40
Computer Literacy	EC-42
Documentation	EC-43
Infection Control and Risk Management	EC-44
Medical Terminology	EC-51
Anatomy, Physiology, and Pathology	EC-52
Medical Law and Ethics	EC-59

Unit: Communications Literacy

NOTE: This content was extracted from the 9-12 cluster of Ohio's Model Language Arts Program. Due to statewide initiatives other than Tech Prep, this literacy unit was not altered to meet competency-based criteria. Each literacy unit forms a critical link between academic teachers and members of business, industry, and labor. [See "The TCP Process" for more information.]

Subunit: Reading—Structure

Competencies:

RS1	Exhibit knowledge of language structure
RS2	Recognize that there may be more than one interpretation of reading selections
RS3	Recognize various literary devices
RS4	Recognize and discuss literary elements
RS5	Develop and use an increasingly sophisticated vocabulary gained through context
RS6	Apply knowledge of language structure to reading
RS7	Explain why there may be more than one interpretation of reading selections
RS8	Recognize effect of literacy devices on meaning
RS9	Analyze author's use of literary elements
RS10	Recognize relationship of structure to meaning
RS11	Describe various interpretations and meaning levels in reading selections
RS12	Characterize author's use of literary devices
RS13	Characterize use of literary techniques
RS14	Critique a variety of literature with regard to plot, dialogue, theme, setting, and characterization
RS15	Apply an expanding vocabulary gained through reading
RS16	Explain various interpretations and meaning levels in reading selections
RS17	Analyze use of literary techniques (e.g., extended metaphor, simile, personification, hyperbole, pun, alliteration)
RS18	Understand use of literary devices (e.g., irony, satire, allegory, onomatopoeia)
RS19	Analyze and synthesize pieces of literature with regard to plot, dialogue, theme, setting, and characterization

Subunit: Reading—Meaning Construction
Competencies:

RM1 Demonstrate ability to recognize appropriate pre-reading strategies
RM2 Describe effectiveness of a reading selection
RM3 Read to clarify personal thinking and knowledge
RM4 Support interpretation of text by locating and citing specific information
RM5 Develop personal response to a variety of literary works
RM6 Recognize diverse literary interpretations
RM7 Engage in self-selected reading activities
RM8 Confirm and extend meaning in reading by researching new concepts and facts
RM9 Self-monitor and apply corrective strategies when communication has been interrupted or lost
RM10 Use features of literary genres to extend meaning
RM11 Assess effectiveness of a selection read
RM12 Use reading as a possible problem-solving strategy to clarify personal thinking and knowledge
RM13 Use knowledge of semantic elements (e.g., figurative language, denotation, connotation, dialect) to clarify meaning when reading
RM14 Predict, recognize, interpret, and analyze themes based on familiarity with author's work
RM15 Compare and contrast literary genres
RM16 Assess validity and quality of selection read
RM17 Clarify meaning when reading
RM18 Compare personal reaction to critical assessment of a literary selection
RM19 Assess validity of diverse literary interpretations
RM20 Use reference books to find, evaluate, and synthesize information
RM21 Identify tone of a literary work
RM22 Critique validity of diverse literary interpretations
RM23 Integrate personal reaction to and critical assessment of a literary selection

Subunit: Reading—Application
Competencies:

RA1	Select and read material for personal enjoyment and information
RA2	Read a variety of complete, unabridged works
RA3	Employ various reading strategies according to purpose
RA4	Participate in selection of books, materials, and topics for literature study groups
RA5	Develop and apply knowledge of the interrelationship of concepts
RA6	Read selections from a variety of styles and formats, recognizing that style and format influence meaning
RA7	Extend value of reading, writing, speaking, viewing, and listening by pursuing, through reading, new concepts and interests developed as a result of these activities
RA8	Read extensively from a particular author's work and explain elements of author's style

Subunit: Reading—Multidisciplinary
Competencies:

RM1	Connect themes and ideas across disciplines through literature
RM2	Read to facilitate learning across curriculum
RM3	Read to develop awareness of human rights and freedom
RM4	Participate actively in a community of learners
RM5	Recognize and explain interaction between literature and various cultural domains (e.g., social technological, political, economic)
RM6	Explore and analyze a variety of cultural elements, attitudes, beliefs, and value structures by men and women of many racial, ethnic, and cultural groups
RM7	Value thinking and language of others
RM8	Relate literature to historical period about which or in which it was written
RM9	Read to facilitate content learning

Subunit: Writing—Structure
Competencies:

WS1 Develop and expand a repertoire of organizational strategies (e.g., narration, comparison/contrast, and description) through a practice and discussion
WS2 Clarify word choice according to audience, topic, and purpose
WS3 Locate and correct errors in usage, spelling, and mechanics using a variety of resources
WS4 Recognize information gained from primary and secondary sources
WS5 Develop writing which contains ordered, related, well-developed paragraphs with sentences of varied lengths and patterns
WS6 Use information from a variety of sources to develop an integrated piece of writing
WS7 Evaluate and revise writing to focus on such things as audience, tone, and purpose
WS8 Recognize differences between documentation and reference list styles
WS9 Develop extended pieces of writing which contain ordered, related, well-developed paragraphs with sentences of varied lengths and patterns
WS10 Select from a repertoire of organization strategies a pattern appropriate to a topic
WS11 Synthesize information from a variety of sources
WS12 Refine word choice and tone according to audience, situation, and purpose
WS13 Appropriately cite information gained from primary and secondary sources
WS14 Use style manuals or software to prepare documentation and reference lists
WS15 Develop effectively organized pieces of expository writing containing strong voice, clear thesis, and well-developed ideas
WS16 Identify organization patterns appropriate to writing topic
WS17 Respond to others' suggested revisions to a writing piece

Subunit: Writing—Meaning Construction
Competencies:

WM1	Demonstrate knowledge of the recursive nature of the writing process by applying it appropriately to various topics, situations, and audiences
WM2	Develop criteria for writing evaluation using scoring guides and peer/teacher assistance to clarify meaning
WM3	Respond to others' suggested revisions to a piece of writing
WM4	Use word processing, graphics, and publishing aids to construct meaning in writing
WM5	Engage in self-initiated writing activities
WM6	Incorporate personal criteria with generally accepted standards for writing evaluation
WM7	Evaluate, analyze, and synthesize information for writing
WM8	Evaluate own writing using personal and established scoring criteria
WM9	Assess personal/peer revisions to a writing piece
WM10	Recognize and refine personal writing styles

Subunit: Writing—Application
Competencies:

WA1	Apply appropriate writing techniques suitable for varied writing tasks
WA2	Use sentence-combining techniques to improve syntactic fluency and maturity
WA3	Write in response to prompted and self-selected topics in practical, persuasive, descriptive, narrative, and expository domains
WA4	Develop personal voice in writing
WA5	Consider audience and purpose for writing
WA6	Develop criteria for selection and potential development of topic
WA7	Write in a journal or learning log to clarify personal thinking and knowledge
WA8	Apply an expanding vocabulary gained through writing
WA9	Make judicious use of reference sources (e.g., dictionary, thesaurus, on-lien data base, encyclopedia)
WA10	Demonstrate, an appreciation for aesthetically pleasing language through word choice and style
WA11	Apply revising and editing strategies needed for writing task
WA12	Vary sentence lengths and patterns
WA13	Refine personal voice in writing
WA14	Vary styles and formats for intended purpose and audience
WA15	Apply criteria for selection and development of topic
WA16	Participate in peer review of writing in progress
WA17	Use transitions between sentences, ideas, and paragraphs in writing
WA18	Revise and edit papers extensively in preparation for presentation/publication
WA19	Develop a variety of genres
WA20	Focus writing and tone on such elements as audience, situation, and purpose
WA21	Develop topic fully and appropriately
WA22	Use writing process to clarify personal thinking and knowledge
WA23	Apply appropriate recursive writing process as suggested by writing task and writer's process
WA24	Develop an extended piece of writing
WA25	Revise writing and tone to assure focus on such elements as audience, situation, and purpose
WA26	Use writing process to write reflectively

Subunit: Writing—Multidisciplinary
Competencies:

WM1	Use writing process for learning across curriculum
WM2	Use writing process to demonstrate knowledge of need for human rights and freedom
WM3	Value and apply collaborative skills in writing process
WM4	Write in response to reading, speaking, viewing, and listening
WM5	Use multidisciplinary resources in writing projects
WM6	Use writing process to facilitate learning across curriculum
WM7	Recognize value of and engage in collaboration in writing process
WM8	Use communication processes to develop a published writing piece in collaboration with others
WM9	Record experiences and observations related to content learning
WM10	Apply collaborative skills in writing process
WM11	Write collaboratively with peers
WM12	Use cross-disciplinary resources in writing projects

Subunit: Listening/Visual Literacy—Structure
Competencies:

LS1	Listen to and view a wide variety of genres
LS2	Become aware of an author's style through listening and viewing a variety of works
LS3	Recognize correct and appropriate grammar, diction, and syntax
LS4	Expand vocabulary through listening to and viewing varied media
LS5	Recognize beauty of language
LS6	Enhance recognition of an author's style through listening and viewing a variety of works
LS7	Recognize use and misuse of language in media
LS8	Refine knowledge of style through listening and viewing multiple works by the same author
LS9	Expand and refine grammar, diction, and syntax through listening
LS10	Compare authors' styles through viewing and listening to their works
LS11	Expand knowledge of complex grammar, diction, and syntax issues

Subunit: Listening/Visual Literacy—Meaning Construction
Competencies:

LM1	Develop critical thinking skills necessary to evaluate media and assess oral presentations
LM2	Compare new oral texts to past experiences and knowledge in order to enhance comprehension
LM3	Recognize how rhythmic patterns, silence, and cadences enhance quality of speech and literature
LM4	Focus listening and viewing on themes and/or plots
LM5	Gather information from listening and viewing experiences to enhance research
LM6	Use critical thinking skills to evaluate media and oral presentations
LM7	Use prior knowledge and experiences to facilitate comprehension of new oral texts
LM8	Identify rhythmic and time patterns in speech and literature
LM9	Identify and analyze themes and/or plots when listening and viewing
LM10	Use information gathered from listening and viewing experiences to expand research
LM11	Enhance use of critical thinking skills to evaluate media and oral presentations
LM12	Consider prior knowledge and experiences when attempting to understand the meaning of new texts
LM13	Appreciate rhythmic and time patterns of speech and literature
LM14	Select viewing and listening materials to support written text
LM15	Evaluate media and oral presentations analytically and critically
LM16	Organize prior knowledge and experiences to comprehend new texts
LM17	Organize and use viewing and listening materials to support written text

Subunit: Listening/Visual Literacy—Application
Competencies:

LA1	Listen attentively during oral reading
LA2	Use media as stimuli for learning and thinking
LA3	Develop knowledge of structure through art, music, and literature
LA4	Use electronic media to enhance and highlight language learning
LA5	Listen and view for entertainment and enjoyment
LA6	Use technology and other media as means of expressing ideas

Subunit: Listening/Visual Literacy—Multidisciplinary
Competencies:

LM1	Facilitate learning across curriculum through critical listening and viewing
LM2	Engage in individual, small-group, and whole-group listening and viewing activities
LM3	Develop language arts (e.g., viewing, listening) projects collaboratively
LM4	Investigate language and cultural differences through listening and viewing activities
LM5	Participate in a community of learners through productive listening

Subunit: Oral Communication—Structure
Competencies:

OS1	Refine oral communication skills
OS2	Demonstrate knowledge of grammar, usage, and syntax when presenting
OS3	Select topics and vocabulary suitable to audience
OS4	Organize notes and ideas for speaking
OS5	Use language imaginatively
OS6	Modulate voice to meaning when interpreting literature orally
OS7	Organize notes and ideas for formal, semiformal and informal presentations of information
OS8	Refine speaking techniques for formal, semiformal, and informal settings
OS9	Develop repertoire of organizational strategies for presenting information orally
OS10	Expand vocabulary to fit topic
OS11	Select topics suitable to audience, situation, and purpose
OS12	Select appropriate strategies when organizing notes and ideas for speaking

Subunit: Oral Communications—Meaning Construction

Competencies:

OM1	Make connections between prior knowledge and new information for oral presentations
OM2	Participate in informal speaking activities
OM3	Use interviewing techniques to gather information
OM4	Communicate orally to entertain and to inform
OM5	Participate in group communication activities
OM6	Take and organize notes when preparing speech/presentation
OM7	Interpret texts orally to illustrate meaning
OM8	Respond to needs of various audiences
OM9	Gather and assess information for speaking
OM10	Communicate orally to inform and persuade
OM11	Prepare and deliver formal speech/presentation
OM12	Participate in a variety of oral interpretations
OM13	Assess needs of audience and adjust language and presentation according to their knowledge
OM14	Analyze and synthesize information for speaking
OM15	Describe effectiveness of literary selection
OM16	Describe topic or idea in order to clarify personal/audience thinking
OM17	Analyze and synthesize information gathered from a variety of sources for speaking
OM18	Describe validity and/or quality of a literary selection and justify selection
OM19	Interpret orally a variety of literature
OM20	Describe topic or idea to clarify meaning for others

Subunit: Oral Communication—Application

Competencies:

OA1	Become proficient at using interviewing techniques
OA2	Give an oral interpretation for a specific audience
OA3	Develop and apply oral communication skills for cooperative/collaborative learning
OA4	Use oral communication for a variety of purposes and audiences (e.g., negotiations, book reviews, rationales)
OA5	Develop and apply decision-making strategies
OA6	Practice interviewing techniques
OA7	Apply interviewing techniques to purposeful interviews
OA8	Focus oral interpretation on a specific audience

Subunit: Oral Communications—Multidisciplinary Competencies:

OM1	Value thinking and language of others
OM2	Develop oral projects collaboratively
OM3	Be involved in individual, small-group, and whole-group language activities
OM4	Participate actively in a community of learners
OM5	Investigate language and cultural differences through oral language activities

Unit: Mathematics Literacy

NOTE: This content was extracted from the 9-12 cluster of Ohio's Model Mathematics Program. Due to statewide initiatives other than Tech Prep, this literacy unit was not altered to meet competency-based criteria. Each literacy unit forms a critical link between academic teachers and members of business, industry, and labor. [See "The TCP Process" for more information.]

Subunit: Numbers and Number Relations
Competencies:

NR1 Compare, order, and determine equivalence of real numbers
NR2 Estimate answers, compute, and solve problems involving real numbers
NR3 Compare and contrast real number system, rational number system, and whole number system
NR4 Extend knowledge to complex number system and develop facility with its operation

Subunit: Measurement
Competencies:

M1 Estimate and use measurements
M2 Understand need for measurement and probability that any measurement is accurate to some designated specification
M3 Understand and apply measurements related to power and work
M4 Understand and apply measurement concepts of distance-rate-time problems and acceleration problems
M5 Use real experiments to investigate elasticity, heat, sound, electricity, magnetism, light, acceleration, velocity, energy, and gravity
M6 Use real-world problem situations involving mass and weight
M7 Use real-world problem situations involving simple harmonic motion
M8 Establish ratios with and without common units
M9 Construct and interpret maps, tables, charts, and graphs as they relate to real-world mathematics
M10 Understand and solve rate-change problems
M11 Understand and solve right triangle relationships as they relate to measurement, specifically to Pythagorean theorem
M12 Graph and interpret ordered pairs
M13 Compute total sales from a variety of items
M14 Comprehend and compute rates of growth or decay
M15 Comprehend, compute, and interpret real problems involving annuities

Subunit: Measurement (continued)
Competencies:

M16 Develop an ability to identify real problems and provide possible solutions
M17 Express and apply different types of measurement scales
M18 Identify area and volume

Subunit: Estimation and Mental Computation
Competencies:

E1 Use estimation to eliminate choices in multiple-choice tests
E2 Use estimation to determine reasonableness of problem situations in a wide variety of applications
E3 Estimate shape of graphs of various functions and algebraic expressions
E4 Use mental computation when computer and calculator are inappropriate

Subunit: Data Analysis and Probability
Competencies:

D1 Organize data into tables, charts, and graphs
D2 Understand and apply measures of central tendency, variability, and correlation
D3 Use curve fitting to predict from data
D4 Use experimental or theoretical probability, as appropriate, to represent and solve problems involving uncertainty
D5 Use computer simulations and random number generators to estimate probabilities
D6 Test hypotheses using appropriate statistics
D7 Read, interpret, and use tables, charts, and graphs to identify patterns, note trends, draw conclusions, and make predictions
D8 Identify probabilities of events involving unbiased objects
D9 Use sampling and recognize its role in statistical claims
D10 Design a statistical experiment to study problem, conduct experiment, and interpret and communicate outcomes
D11 Describe normal curve in general terms and use its properties
D12 Create and interpret discrete probability distributions
D13 Understand concept of random variable
D14 Apply concept of random variable to generate and interpret probability distributions, including binomial, uniform, and chi square

Subunit: Algebra
Competencies:

A1	Describe problem situations by using and relating numerical, symbolic, and graphical representations
A2	Use language and notation of functions in symbolic and graphing settings
A3	Recognize and use equivalent zeros of a function, roots and the solution of an equation in terms of graphical and symbolic representations
A4	Describe and use logic of equivalence in working with equations, inequalities, and functions
A5	Develop graphical techniques of solution for problem situations involving functions
A6	Explore and describe characterizing features of functions
A7	Make arguments and proofs in algebraic settings
A8	Factor difference of two squares
A9	Identify slope, midpoint, and distance
A10	Explore and combine rational functions
A11	Explore factoring techniques
A12	Solve quadratic equations by factoring and formula
A13	Set up and solve linear equations
A14	Solve systems of linear equations with two variables
A15	Describe geometric situations and phenomena using variables, equations, and functions
A16	Describe measures of central tendency, mean, median, mode, and variance algebraically and graphically
A17	Represent inequalities on number line and in coordinate plane
A18	Use coordinate arguments in making geometric proofs
A19	Symbolize transformations of figures and graphs
A20	Explore geometric basis for functions of trigonometry
A21	Graph linear functions
A22	Develop and use vectors to represent direction and magnitude including operations
A23	Use polar and parametric equations to describe, graph, and solve problem situations
A24	Represent sequences and series as functions both algebraically and graphically
A25	Explore recursive functions and procedures using spreadsheets, other computer utilities, and appropriate notions
A26	Describe and solve algebraic situations with matrices
A27	Describe and use inverse relationship between functions including exponential and logarithmic

Subunit: Algebra (continued)
Competencies:

A28 Analyze and describe errors and error sources that can be made when using computers and calculators to solve problems

A29 Decide whether problem situation is best solved using computer, calculator, paper and pencil, or mental arithmetic/estimation techniques

A30 Explore relationships between complex numbers and vectors

A31 Make arguments concerning limits, convergence and divergence in context involving sequences, series, and other types of functions

A32 Represent transformations in plane with matrices

A33 Contrast and compare algebra's of rational, real, and complex numbers with characteristics of a matrix algebra system

A34 Construct polynomial approximations of a function over specified intervals of convergence

A35 Examine complex numbers as zeros of functions

A36 Translate verbal statements into symbolic language

A37 Simplify algebraic expressions

A38 Use laws and exponents (including scientific notation)

A39 Expand and extend idea of vectors and linear algebra to higher dimensional situations

A40 Use the idea of independent basis elements for a vector space and associated fundamental concepts of finite dimensional linear algebra

A41 Develop and communicate arguments about limit situations

A42 Use matrices to describe and apply transformations

A43 Develop and use polar and parametric equations to represent problem situations

A44 Explore proofs by mathematical induction

Subunit: Geometry
Competencies:

G1	Create and interpret drawings of three-dimensional objects
G2	Represent problem situations with geometric models and apply properties of figures
G3	Apply Pythagorean theorem
G4	Demonstrate knowledge of angles and parallel and perpendicular lines
G5	Explore inductive and deductive reasoning through applications to various subject areas
G6	Translate between synthetic and coordinate representations
G7	Identify congruent and similar figures using transformation with computer programs
G8	Deduce properties of figures using transformations and coordinates
G9	Use deductive reasoning
G10	Explore compass and straightedge constructions in context of geometric theorems
G11	Demonstrate knowledge of and ability to use proof
G12	Use variety of proof techniques (e.g., synthetic, transformational, and coordinate)
G13	Use variety of proof formats, including T-proof (i.e., two-column) and paragraph proof
G14	Explore different proof strategies
G15	Investigate different proofs of theorems
G16	Develop knowledge of an axiomatic system
G17	Apply transformations and coordinates in problem solving
G18	Represent problem situations with geometric models and apply properties of figures
G19	Deduce properties of figures using vectors
G20	Analyze properties of Euclidean transformations and relate translations to vectors
G21	Apply vectors in problem solving
G22	Develop further knowledge of axiomatic systems by investigating and comparing various geometry's

Subunit: Patterns, Relations, and Functions
Competencies:

P1 Model real-world phenomena with polynomial and exponential functions
P2 Explore relationship between zeros and intercepts of functions
P3 Translate among tables, algebraic expressions, and graphs of functions
P4 Use graphing calculator or computer to generate graph of a function
P5 Explore relationship between a linear function and its inverse
P6 Describe and use characteristics of polynomial functions in problem-solving situations
P7 Explore conic sections and graph using graphing calculator or computer
P8 Apply trigonometric functions to problem situations involving triangles
P9 Discover relationships between algebraic description, kind, and properties of conic
P10 Explore periodic real-world phenomena using sine and cosine functions
P11 Analyze effects of parameter changes on graphs
P12 Use graphing calculator or computer to graph functions
P13 Develop an knowledge of rational and transcendental functions
P14 Understand connections between trigonometric and circular functions
P15 Use circular functions to model periodic real-world functions
P16 Solve trigonometric equations and verify trigonometric identities
P17 Understand connections between trigonometric, exponential, and logarithmic functions and polar coordinates, complex numbers, and series
P18 Model real-world phenomena with a variety of functions
P19 Graph using polar coordinates
P20 Explore graphs in three dimensions
P21 Explore functions of several variables
P22 Explore recursive functions using spreadsheets and/or programming languages

Unit: Science Literacy

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Subunit: Scientific Inquiry

Competencies:

Q1 Check the appropriateness and accuracy of measures and computations using various strategies (e.g., estimations, unit analysis, determination of significant figures)

Q2 Use ratios, proportions, and probabilities in appropriate problem situations

Q3 Translate information from and represent information in various forms with equal ease (e.g., tables, charts, graphs, diagrams, geometric figures)

Q4 Use existing algebraic formulas and create new ones in appropriate problem-solving situations

Q5 Estimate and justify probabilities of outcomes of familiar situations based on experimentation and other strategies

Q6 Invent apparatus and mechanical tools needed to perform unique tasks in various situations

Q7 Identify, compare, and contrast different modes of inquiry, habits of mind, and attitudes and dispositions

Q8 Design investigations that are safe and ethical (i.e., obtain consent and inform others of potential outcomes, risks and benefits, and show evidence of concern for human health and safety, concern for non-human species)

Q9 Make and read scale drawings, maps, models, and other representations to aid planning and understanding

Q10 Seek elaboration and justification of data and ideas, and reflect on alternative interpretations of the information

Q11 Use appropriate units for counts and measures

Q12 Create and use databases (electronic and other) to collect, organize, and verify data and observations

Q13 Design and conduct investigations with multiple variables

Q14 Communicate the results of investigations clearly in a variety of situations

Subunit: Scientific Inquiry (continued)
Competencies:

Q15 Examine relationships in nature, offer alternative explanations for the observations, and collect evidence that can be used to help judge among explanations

Q16 Trace the development (e.g., history, controversy, and ramifications) of various theories, focusing on supporting evidence and modification with new evidence

Q17 Select, invent, and use tools, including analog and digital instruments, to make and record direct measurements

Q18 Observe and document events and characteristics of complex systems

Q19 Explain the influence of perspective (e.g., spatial, temporal, and social) on observation and subsequent interpretations

Q20 Create multiple representations of the same data using a variety of symbols, descriptive languages, mathematical concepts, and graphic techniques

Q21 Generate testable hypotheses for observations of complex systems and interactions

Q22 Document potentially hazardous conditions and associated risks in selected homes and public areas

Q23 Participate in public debates, relying on documented and verified data to construct and represent a position on scientific issues

Q24 Construct and test models of physical, biological, social, and geological systems

Q25 Read, verify, debate, and, where necessary, refute research published in popular or technical journals of science (e.g., *Discover*, *Omni*, *Popular Mechanics*)

Q26 Explore discrepant events and develop and test explanations of what was observed

Q27 Conduct theory-based research using surveys, observational instruments, and other methods

Q28 Modify personal opinions, interpretations, explanations, and conclusions based on new information

Q29 Analyze error and develop explanations in various domains

Q30 Formulate taxonomic schemes based upon multivariate models that help to explain similarities and differences in form, distribution, behavior, survival, and origin of objects and organisms

Q31 Demonstrate various logical connections between related concepts (e.g., entropy, conservation of energy)

Q32 Account for discrepancies between theories and observations

Q33 Analyze the changes within a system when inputs, outputs, and interactions are altered

Subunit: Scientific Inquiry (continued)
Competencies:

Q34 Create, standardize, and document procedures

Q35 Determine the sources of significant disparities between the predicted and recorded results and change research procedures to minimize disparities

Q36 Research, locate, and propose applications for abstract patterns (e.g., fractals, Fibonacci sequences, string theory, orbitals)

Q37 Recognize and utilize classification systems for particles, elements, compounds, phenomena, organisms, and others for exploring and predicting properties and behaviors

Q38 Suggest and defend alternative experimental designs and data explanations (e.g., sampling, controls, safeguards)

Q39 Recognize and communicate differences between questions that can be investigated in a scientific way and those that rely on other ways of knowing

Q40 Draw conclusions based on the relationships among data analysis, experimental design, and possible models and theories

Q41 Suggest new questions as a result of reflection on and discussions about their own scientific investigations

Q42 Investigate, assess, and comment on strengths and weakness of the descriptive and predictive powers of science

Q43 Create new information from representations of data in a variety of forms (e.g., symbols, descriptive languages, graphic formats) utilizing a variety of techniques (e.g., interpolations, extrapolations, linear regressions, central tendencies, correlation's)

Subunit: Scientific Knowledge
Competencies:

K1 Investigate various types of dynamic equilibrium (e.g., biological, geological, mechanical, chemical)

K2 Investigate the relationship between the rates of energy exchange and the relative energy level of components with systems (e.g., tropic levels of ecosystems, osmosis, rate of heating and cooling, storms)

K3 Investigate patterns in the natural world (e.g., heredity, crystalline structures, population and resource distributions, diffraction, dispersion, polarization)

K4 Investigate models and theories that help to explain the interactions of components in systems (e.g., conservation of mass, energy, and momentum; food webs; natural selection; entropy; plate tectonics; chaos; relativity; social-psychology)

K5 Investigate degrees of kinship among organisms and groups of organisms

K6 Investigate the limits of the definition of life, and investigate organisms and physical systems that exist at or near these limits (e.g. viruses, quarks, black holes)

K7 Investigate estimates and measurements of a wide range of distances and rates of change

K8 Investigate the historical development of theories of change over time (e.g., natural selection, continental drift, the big bang, geologic change)

K9 Investigate physical and chemical changes in living and non-living systems (e.g., photosynthesis, weathering processes, glaciation, thermal effects of materials, energy cells)

K10 Investigate simulations of nuclear change (e.g., radioactivity, half life, carbon dating)

K11 Investigate conservation principles associated with physical, chemical, and nuclear changes

K12 Formulate descriptions of the impacts of various forms of mechanical and electromagnetic waves on various organisms on each other over time

K13 Formulate models and hypotheses for patterns in the natural world (e.g., earth structures, transportation systems, migrations, communications, constellations)

K14 Formulate explanations for the influences of objects and organisms on each other over time

K15 Formulate and interpret explanations for change phenomena (e.g., mass extinction's, stellar evolution, punctuated equilibrium, molecular synthesis)

Subunit: Scientific Knowledge (continued)
Competencies:

K16 Formulate and interpret explanations for the magnitudes of diversity at different periods of geologic time (e.g., mutation, global cataclysms, continental drift, competition, mass extinction's)

K17 Formulate interpretations of the structure, function, and diversity in a variety of organisms and physical systems (e.g., DNA and RNA variants, nucleons, interaction particles)

K18 Formulate understandings of geologic time (e.g., millennia, periods, epochs)

K19 Formulate an understanding of the historical development of the model of the universe

K20 Formulate explanations and representations of the production, transmission, and conservation of energy in biological and physical systems (e.g., weather, volcanism, earthquakes, electricity, magnetism, cellular respiration)

K21 Formulate models and hypotheses about patterns in the natural world (e.g., social behavior, molecular structure, energy transformation, entropy, randomness, aging, chaos, hormonal cycles)

K22 Formulate interpretations of the relationship between energy exchange and the interfaces between components within systems

K23a Formulate estimations for the range of energies within and between various phenomena (e.g., thermal, electromagnetic, thermonuclear, chemical, electrical)

K23b Formulate explanations for the historical development of descriptions of motions interactions and transformations of matter and energy (e.g., classical Newtonian mechanics, special and general relativity, chaos)

K24 Formulate models that can be used to describe fundamental molecular interactions in living and non-living systems (e.g., cell membranes, semiconductors).

K25 Formulate an understanding of the degree of relationship among organisms and objects based on molecular structure (e.g., proteins, nucleic acids)

K26 Formulate hypotheses and models that may account for observable events (e.g., electricity and magnetism, gravitation, atoms, bonding, chemical reactions, quantum effects, energy flow on biological systems, predator-prey relationships)

K27 Formulate models and hypotheses about change over time (e.g., natural selection, speciation, punctuated equilibrium, phyleytic gradualism, stellar evolution, plate tectonics, radioactive decay, quantum mechanical theory)

Subunit: Scientific Knowledge (continued)
Competencies:

K28 Formulate lists of limitations and propose refinements of standard classification systems (e.g., periodic table, IUPAC, Linnean, standard model)

K29 Formulate specific cases of limitations and possible exceptions of theories and principles regarding the interactions of moving objects and organisms (e.g., fluid flow in vessels, motion near the speed of light, Heisenberg uncertainty principle, meteorological prediction, local variation and diversity, predicting earthquakes, energy transport in cellular respiration)

K30 Formulate plans and contingencies that can be used to accommodate for changes to and stresses on systems (e.g., wildlife and habitat management, corrosion prevention, noise abatement, structure design)

K31 Formulate models of molecular, atomic, ionic, and subatomic structures and the physical and biological implications of these structures (e.g., genes, nucleons, quarks)

K32 Formulate estimates for a wide range of measurements and scales (e.g., angstroms to light years)

K33 Formulate and interpret representations of time from origin to present accounting for phenomena of scale (e.g., smoothness, punctuation's, chaos)

K34 Formulate interpretations of the historical development of various theories of possible causes of diversity among physical and biological phenomena (e.g., the works of Aristotle, Mendel, Darwin, McClintock)

K35 Formulate models and hypotheses that can be used to explain the interactions of components within technological and ecological systems

Subunit: Conditions for Learning Science
Competencies:

C1 Participate actively in dialogue about and resolution of community issues
C2 Assess information from various countries in the original language or translated form to ascertain the perspectives of many cultures
C3 Analyze the scientific ideas presented in science fiction stories and films
C4 Perform and repeat investigations to verify data, determine regularity, and reduce the impact of experimental error
C5 Present the results of investigations in a variety of forums
C6 Contribute to the decisions regarding topics for investigation
C7 Use various creative means to communicate interpretations of scientific ideas, concepts, phenomena, and events
C8 Consider the scientific thinking and language of others
C9 Individually and collaboratively produce clearly written representations of investigative results
C10 Fulfill responsibilities as part of a research group
C11 Select and utilize resources by various criteria (e.g., efficiency, effectiveness, health, safety) that are appropriate to the investigations being conducted by groups
C12 Present persuasive argument based on the scientific aspects of controversial issues
C13 Collect, store, retrieve, and manipulate information with available t technologies alleges that may range from hand processes up through computer applications
C14 Investigate social issues with a scientific perspective (e.g., human rights, wellness, economics, futurism, environmental ethics)
C15 Keep journals of observations and inferences made over an extended period of time and reflecting upon the impact of these recorded ideas on their thinking and actions
C16 Examine the intellect, perspectives, and ethics of notable scientists
C17 Collect and analyze observations made over extended periods of time and compare these to scientific theories
C18 Create presentations of scientific understandings using diverse modes of expressions
C19 Conduct formal scientific debates in the classroom
C20 Wonder about the likelihood of events that may occur by chance or coincidence
C21 Plan and conduct field trips and experiences for small and large groups
C22 Analyze the historical context which leads to and has lead to scientific t theories

Subunit: Conditions for Learning Science (continued)
Competencies:

C23 Seek information on topics of personal scientific interest from a variety of sources
C24 Conduct learner-developed investigations independently and collaboratively over periods of week and months
C25 Listen attentively and critically to presentations of scientific information made by others
C26 Conduct analyses of propaganda related to scientific issues
C27 Perform investigations that require observations over varying periods of time
C28 Experience scientific concepts as interpreted by other cultures through multimedia and local and global specialists
C29 Access appropriate technology to perform complicated, time-consuming tasks
C30 Relate historical accounts of science to the cultural context in which they were written
C31 Work as a contributing member of a collaborative research group
C32 Examine the influences of social and political structures and realities that contribute to inquiry about scientific issues
C33 Use technology (e.g., desktop publishing, teleconferencing, networking) to communicate scientific ideas
C34 Explore and analyze a variety of perspectives on science (e.g., works by men and women of many racial, ethnic, and cultural groups)
C35 Lead groups of learners of various ages in designing, planning, and conducting science activities
C36 Respect the scientific thinking of others and self
C37 Recognize and contrast different epistemologies
C38 Develop possible courses of action in response to scientific issues of local and global concern
C39 Determine the validity of research conclusions in relation to the design, performance, and results
C40 Develop multimedia presentations of group and individual research projects and investigations appropriate for a variety of audiences and forums
C41 Produce interesting and scientifically correct stories and present them using various modes of expression
C42 Reflect on the ideas and content found in their own journal records
C43 Examine ambiguous results and formulate explanations
C44 Recognize and synthesize the contributions to scientific thought of individuals from many cultures

Subunit: Conditions for Learning Science (continued)
Competencies:

C45 Construct models and simulations of the component structures and functions of living and non-living entities
C46 Lead multi-age groups in the examination of and planned resolution for scientific issues
C47 Recognize and choose members of research teams based upon the merit of their ideas and skills
C48 Construct a portfolio of products, documentation, and self-evaluations of his/her own abilities, skills, and experiences
C49 Synthesize scientific information from a variety of sources
C50 Evaluate and prioritize scientific issues based upon risk-benefit analyses
C51 Refining scientific skills from a variety of experiences

Subunit: Applications for Science Learning
Competencies:

A1 Answer student-determined questions by designing databases and drawing inferences from the analyses of the information in these data bases
A2 Make personal behavior decisions by interpreting information that has a scientific basis
A3 Propose courses of action that will validate and demonstrate personal understandings of scientific principles
A4 Guide other learners in their understanding of the interactions of technologies and society at various periods in time
A5 Promote and carry out practices that contribute to a sustainable environment
A6 Study and propose improvements in public services and systems in their community
A7 Choose consumer materials utilizing personal and environmental risk and benefit information
A8 Make inferences and draw conclusions using databases, spreadsheets, and other technologies
A9 Do simple trouble-shooting on common electrical and mechanical systems, identifying and eliminating possible causes of malfunctions
A10 Construct devices that perform simple, repetitive actions
A11 Investigate the functionality of various geometric shapes in the natural world and the designed world (e.g., translations from spherical to plane representations cause distortions, triangular shapes contribute to rigidity and stability in structures, round shapes minimize boundary for a given capacity)
A12 Make decisions regarding personal and public health
A13 Evaluate the social and ecological risks and benefits resulting from the use of various consumer products
A14 Analyze the contributions of advances in technology through history to his/her everyday life
A15 Identify and reduce risks and threats to a sustainable environment
A16 Extend the limits of human capabilities using technological enhancements
A17 Use and recognize various propaganda techniques
A18 Solve unique problems using the results of systematic analyses
A19 Choose everyday consumer products that utilize recent innovation and pass appropriate performance criteria
A20 Refine personal career interests through investigations of the diversity of manufacturing, research, service, and invention processes

Subunit: Applications for Science Learning (continued)
Competencies:

A21 Predict and investigate the working of toys and tools while controlling and manipulating variables (e.g., friction, gravity, forces)
A22 Write, follow, modify, and extend instructions (e.g., equations, algorithms, formulas, flow diagrams, illustrations)
A23 Create products, make inferences, and draw conclusions using databases, spreadsheets, and other technologies
A24 Predict various scenarios and propose solutions to community issues using scientific information (e.g., actuarial tables, census data, topographic maps, incidence data, climatic data)
A25 Use scientific evidence to consider options and formulate positions about the health and safety of others and him/herself
A26 Search for, use, create, and store objects and information using various strategies and methods of organization and access
A27 Research and write environmental impact statements of his/her own design
A28 Compare school-based science perspectives with those gained through cutting-edge technological applications
A29 Design management plans for natural and human-altered environments (e.g., woodlots, patios, lots, lawns, farmlands, forests)
A30 Refine personal career interests
A31 Promote public awareness of the interaction of technology with social i issues
A32 Advocate and propose courses of action for local and global scientific issues using global networks
A33 Use appropriate technologies to prepare and present the findings of investigations incorporating tables, graphs, diagrams, and text
A34 Make informed consumer choices by evaluating and prioritizing information, evidence, and strategies
A35 Develop an informed point-of-view that allows for validation or refutation of the scientific statements and claims of advocated before pursuing courses of action (e.g., contributing support, signing petitions, casting votes)
A36 Differentiate between observations and inferences in the exploration of evidence related to personal, scientific, and community issues
A37 Develop and write environmental impact and safety and hygiene management plans
A38 Use technology to collect, analyze, and communicate information (e.g., electronic networks, desktop publishing, remote sensing, graphing calculators, satellite telemetry, and others)
A39 Design, construct, and market inventions

Unit: Technology Literacy

NOTE: Over 500 Ohio business, industry, and labor representatives examined, altered, and then verified the content for this unit during the TCP Process. The original content was extracted from the Report of the Task Force on Technology Competence—Learner Goals for All Minnesotans, published by the Minnesota State Council on Vocational Technical Education. The Technology Literacy unit forms a critical link between all teachers and stresses the importance of technological impact on teaching and learning. [See "The TCP Process" for more information.]

Competencies:

T1 Demonstrate a systems view of technology based on the interdependence of social, political, economic, and ecological systems
T2 Assess the career, family, and personal development implications of technological change
T3 Demonstrate continuous learning via technology
T4 Demonstrate global appreciation for technology's potential effects on cultures, geographic areas, and the environment
T5 Apply historical perspective on technology to the development and use of new technologies
T6 Apply diverse technologies to store, access, process, create, and communicate information needed to solve problems
T7 Apply legal principles and ethical conduct to the use of technology
T8 Demonstrate competency in mathematics, science, social sciences, communication, and computer skills through the analysis, design, and evaluation of technological systems
T9 Analyze the potential of alternative technological systems to solve problems and/or to extend human capabilities
T10 Use a variety of tools, materials, and equipment in solving problems and extending human capabilities
T11 Assess risks and benefits of technological developments from an ecological, economic, social, and political perspective
T12 Value human diversity as part of a team in suggesting, designing, and testing solutions to technological problems

Unit: Employability Skills

Competency: Develop a career plan

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: **Prepare for employment**

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: **Evaluate the importance of self-esteem as an employability skill**

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: Project professional image

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: Achieve individual and professional goals

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: Manage personal finances

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: Manage stressful situations

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: Analyze effects of family on work and work on family

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: Apply lifelong learning skills

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: Manage professional development

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: Use teamwork to solve problems

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: Conduct team meetings

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: Demonstrate proficiency in technical documentation

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: Demonstrate proficiency in technical report writing

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: **Comply with local, state, and federal regulations**

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: Comply with environmental safety standards, accident prevention methods, and disaster plans

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: Maintain personal safety and hygiene

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: **Demonstrate general knowledge of basic chemistry**

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: **Demonstrate general knowledge of the human body**

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: **Demonstrate knowledge of the circulatory/cardiovascular system**

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: **Demonstrate knowledge of the lymphatic system**

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: **Demonstrate knowledge of the urinary system**

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: **Demonstrate knowledge of the reproductive system**

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: **Demonstrate knowledge of the senses**

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: Demonstrate knowledge of immunology

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: Comply with medical law and ethics

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: Exhibit ethical behavior

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: Describe legal ramifications of misconduct

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: **Practice discretion regarding patient information**

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: **Practice personal professional protocol with medical community**

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Radiographer

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	Page
Employability Skills	RAD-3
Professionalism	RAD-8
Teamwork	RAD-12
Computer Literacy	RAD-14
Documentation	RAD-15
Infection Control and Risk Management	RAD-16
Medical Terminology	RAD-23
Anatomy, Physiology, and Pathology	RAD-24
Medical Law and Ethics	RAD-31
Psychology of Stress	RAD-33
Psychology of Human Relations	RAD-35
First Aid and Medical Emergencies	RAD-38
General Administrative Duties	RAD-40
Vital Signs	RAD-46
Nutrition	RAD-49
Basic Pharmacology	RAD-51
Patient Education	RAD-53
Examinations	RAD-55
Radiography	RAD-60

DON'T FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: Develop a career plan

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: Prepare for employment

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: Evaluate the importance of self-esteem as an employability skill

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: **Demonstrate job retention skills**

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: **Demonstrate knowledge of work ethic**

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: **Project professional image**

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: **Achieve individual and professional goals**

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: **Manage personal finances**

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: Manage stressful situations

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: Analyze effects of family on work and work on family

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: Apply lifelong learning skills

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: Manage professional development

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: **Demonstrate knowledge of teamwork**

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: **Demonstrate teamwork**

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: **Use teamwork to solve problems**

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: **Conduct team meetings**

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: **Describe personal computer operations**

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: **Operate computer hardware**

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: **Use software**

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: Demonstrate proficiency in technical documentation

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: Demonstrate proficiency in technical report writing

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: **Comply with local, state, and federal regulations**

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: **Maintain personal safety and hygiene**

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: **Demonstrate general knowledge of basic chemistry**

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: **Demonstrate general knowledge of the human body**

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: **Demonstrate knowledge of the circulatory/cardiovascular system**

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: **Demonstrate knowledge of the lymphatic system**

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: **Demonstrate knowledge of the urinary system**

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: **Demonstrate knowledge of the reproductive system**

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: **Demonstrate knowledge of the senses**

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: **Demonstrate knowledge of immunology**

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: Comply with medical law and ethics

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: Exhibit ethical behavior

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: Describe legal ramifications of misconduct

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: **Practice discretion regarding patient information**

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: **Practice personal professional protocol with medical community**

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: **Analyze factors that influence a patient's response to stress**

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: **Analyze physiological response to stress**

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: Analyze psychological response to stress

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: Provide care for a patient with an ineffective coping response

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: Explain human growth and development

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: Demonstrate appropriate communication techniques

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: Establish rapport

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: Use emergency procedures

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: Perform first aid

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: Respond to medical emergencies

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: Maintain medical records and laboratory reports

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: Prepare office communications

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: **Use office equipment**

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: **Demonstrate knowledge of different payment systems**

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: Perform diagnostic coding

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: Process insurance claims/forms

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: Perform financial functions

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Vital Signs

Competency: Interview patient

Competency Builders:

Complete patient information sheets
Record medical history (e.g., allergies, current medications)
Assess bio-psycho-social condition
Validate data with patient or patient's family member(s)

Competency: Measure temperature

Competency Builders:

Follow safety and aseptic precautions for taking temperature
Identify normal range and average temperature of oral, axillary, tympanic, and rectal methods of measuring body temperature
Identify factors that may affect temperature
Select route for measuring temperature
Demonstrate use of different types of thermometers
Record temperature measurements
Report abnormal temperature measurements
Maintain thermometer(s)

Competency: Measure pulse

Competency Builders:

Identify criteria for selecting pulse site (e.g., femoral, apical, radial)
Identify normal pulse range for different age groups
Identify factors that may affect pulse
Identify variations from normal pulse that should be reported
Record pulse

Competency: Measure respiration

Competency Builders:

Assess lung sounds
Measure rate, depth, and rhythm of respiration
Identify normal respiratory rate for different age groups
Report signs of compromised respiration
Identify factors that may affect respiration
Record respiration

Competency: Measure blood pressure

Competency Builders:

Identify myths and misconceptions related to blood pressure and hypertension
Identify etiology of hypertension
Identify consequences of untreated hypertension
Identify normal range of blood pressure for different age groups
Record blood pressure
Identify factors that affect blood pressure
Select appropriate cuff size
Describe the effect of inappropriate cuff size on accurate blood pressure reading
Identify variations from normal blood pressure that should be reported
Demonstrate use of aneroid sphygmomanometer gmomanometer
Demonstrate use of mercurial sphygmomanometer gmomanometer
Demonstrate palpated blood pressure

Competency: Obtain physical measurements

Competency Builders:

Measure adult height
Measure adult weight
Measure adult chest and waist expansion
Measure infant height
Measure infant weight
Measure infant head and chest circumference
Measure auditory status (e.g., tympanogram)
Measure visual status (e.g., eye chart)
Identify color blindness
Record all results

Unit: Nutrition

Competency: Identify fundamentals of nutrition

Competency Builders:

Identify nutrients and food groups
Explain role of nutrients to body functions
Explain regional, cultural, and religious food patterns
List factors which must be considered when purchasing food
Identify component of a balanced diet across the life span (e.g., USDA Food pyramid)
List factors which must be considered when storing food
Identify methods of food preparation
Instruct patient in sound nutrition principles

Competency: Identify nutritional needs related to special conditions and/or diseases

Competency Builders:

Describe common diets related to health alterations (e.g., pureed, mechanical-soft)
Describe special diets
Identify community resources
Identify risks of non-compliance with dietary restrictions
Educate patient regarding dietary hazards (e.g., caffeine, fats)

Competency: Draw correlation between diet and exercise

Competency Builders:

Identify methods of exercise
Explain effect of exercise and food on energy level
Write an exercise plan
Identify weight-related issues

Competency: **Identify facets of alternative nutrition**

Competency Builders:

Identify indications and effects of tube feedings
Identify indications and effects of intravenous fluids
Identify indications and effects of lipids
Identify indications and effects of hyperal

Unit: Basic Pharmacology

Competency: Maintain supply of medications

Competency Builders:

Check inventory stock
Contact supplier
Rotate stock
Process narcotic forms (i.e., Drug Enforcement Agency (DEA) license)
Store medications properly
Prepare expired medications for disposal
Dispose of medications properly (i.e., comply with government regulations)

Competency: Calculate dosage according to physician's orders

Competency Builders:

Verify accuracy of medical orders
Use Physician's Desk Reference (PDR)
Transcribe medication order
Calculate oral dosage
Calculate parenteral dosage
Calculate sublingual dosage
Calculate pediatric dosage
Calculate intravenous dosage and rate of flow

Competency: Instruct patients on use of medications

Competency Builders:

Provide verbal and/or written instructions for medication use
Explain use of medications (e.g., identify side effects, adverse effects, interactions)
Maintain standing orders according to physician's protocol (e.g., prescription refills)

Competency: Dispense medications according to medical orders

Competency Builders:

Identify patient
Verify patient allergies
Use reference materials
Verify accuracy of medical orders
Calculate dosages
Prepare oral medication
Identify correct anatomical sites
Prepare intramuscular, intradermal, and subcutaneous injectable medications
Prepare and administer sublingual medications
Prepare transdermal medications
Prepare inhalant medications
Prepare instillation medications
Prepare and administer topical medications
Prepare and administer rectal medications
Prepare and administer vaginal medications
Assist with administration of local anesthesia
Administer medications
Document medication administration
Document patient response to medications

Competency: Evaluate response to medication

Competency Builders:

Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medication

Unit: Patient Education

Competency: Inform patient/family about diagnostic procedures

Competency Builders:

Distribute literature regarding advised procedure
Explain diagnostic procedures
Explain preparation for diagnostic procedures
Translate medical terminology into lay terms
Distribute resource materials related to test results
Schedule patient follow-up
Obtain informed consent signature

Competency: Educate patient/responsible party about self-care related to results of diagnostic procedure/therapy

Competency Builders:

Identify support groups and resources
Obtain verbal and written information to plan patient's care
Reinforce special diets with patient/responsible party
Reinforce recommended exercise programs with patient/responsible party
Reinforce specialized applications (e.g., ortho, dietary, ostomy, splints, orthotics) with patient/responsible party
Reinforce self-administration of medications with patient/responsible party
Reinforce health maintenance techniques with patient/responsible party
Refer patient/responsible party to support groups and resources
Solicit patient/responsible party feedback
Record teaching and patient response
Instruct patient/responsible party in necessary adaptations to environment
Instruct patient/responsible party in adaptive techniques (e.g., activities of daily living, homemaking)

Competency: Provide psycho-social care for patient/family

Competency Builders:

Arrange emotional support for patient and family member(s)
Report child abuse and/or neglect
Respond to emotional needs of terminally ill patient and family member(s)
Apply reality orientation technique
Arrange diversional activity for patient

Competency: Inform patient about World Health Organization (WHO) immunization requirements

Competency Builders:

Instruct patient/family on infant, preschool, adolescent, and adult immunizations
Instruct patient/family on international requirements
Reinforce instructions from other health professionals to patient/family member(s)

Unit: Examinations

Competency: **Demonstrate general knowledge of diagnostic studies**

Competency Builders:

Describe the various methods of examining patients
Explain the functions of commonly used examining instruments
Describe the sequence of steps in a general physical examination
Identify various patient positions used in examinations
Identify common diagnostic blood tests performed in the medical laboratory
Differentiate between cultures and smears used in bacteriology
Identify sources from which cultures and smears may be obtained
Describe common radiological and sonographic studies and imaging techniques
Identify the purposes of nuclear medicine
Identify common cardiopulmonary diagnostic examinations
Identify common neurological diagnostic examinations

Competency: **Demonstrate principles of body mechanics and ergonomics**

Competency Builders:

Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient
Assist patient in and out of wheelchair
Assist patient with crutches
Assist patient with cane
Assist patient with walker
Assist patient with standing
Assist patient with cast or splints
Assist patient to bathroom
Position patient using supportive devices (e.g., pillows, footboards)
Perform ROM (i.e., range of motion)

Competency: Assist with general examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Change paper on examination table
Provide for patient privacy
Prepare patient for examination
Communicate with patient with special needs (e.g., hearing or vision disorder)
Inventory personal property
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Competency: Assist with eye, ear, nose, and throat examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with and chart eye irrigation
Assist with and chart ear irrigation
Assist with and chart tympanometry
Assist with and chart laryngoscopy
Describe taste bud reactions
Conduct visual screening
Conduct auditory screening
Administer eye, ear, and nose medications
Clean examination room after procedure

Competency: **Assist with obstetric and gynecological examination**

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Obtain cytology history
Assist with Pap smear
Instruct patient in self breast examination
Clean examination room after procedure

Competency: **Assist with pediatric examination**

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Record measurements on growth chart
Record immunizations
Apply restraints when needed (e.g., papoose board)
Clean examination room after procedure

Competency: **Assist with proctology and gastrology examination**

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with proctoscopy
Clean examination room after procedure

Competency: **Assist with orthopedic examination**

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment (e.g., soaks)
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with casting and splinting procedures
Demonstrate use of ambulatory aids
Assist patient in wheelchair transfer to and from examination table
Clean examination room after procedure

Competency: Assist with neurological examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Competency: Assist with geriatric examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Unit: Radiography

Competency: Identify characteristics of x-radiation

Competency Builders:

Define terms used in radiography
Explain where x-rays are in the electromagnetic spectrum
Identify characteristics of x-radiation (e.g., no mass or charge)
Compare different methods of measuring x-radiation

Competency: Explain how x-rays are produced

Competency Builders:

Identify the different parts of the x-ray tube
Describe the process for production of x-radiation
Differentiate among the different types of radiation produced
Describe radiographic density (i.e., contrast and detail
Explain the Inverse Square Law and its effect on x-ray production
Apply radiographic formulas and their effect on x-ray production
Explain Ma, KvP and time and their relationship on x-ray production
Describe factors that affect radiographic density, contrast, detail, and distortion

Competency: Describe effects of radiation on the human body

Competency Builders:

Explain somatic and genetic effects of x-rays
Identify tissues most and least sensitive to radiation
Differentiate among exposure variables and their effects, both acute and chronic
Describe methods for reducing patient exposure
Explain methods of operator protection
Identify common methods of personnel monitoring
Describe LD 50/30 (i.e., Lethal Dose)
Explain MPD (i.e., Maximum Permissible Dose)

Competency: **Demonstrate knowledge of pathological processes that affect radiographic imaging**

Competency Builders:

Differentiate between additive and destructive pathologies
Identify pathological processes that affect each body system
Correlate pathological conditions on images from various imaging modalities

Competency: **Practice radiation safety procedures in accordance with OSHA and EPA**

Competency Builders:

Demonstrate radiation safety precautions for patients
Demonstrate radiation safety precautions for operators
Comply with equipment safety laws
Elicit patient history which might indicate a risk or a reaction (e.g., allergies, tape sensitivities, injection of an iodinated contrast medium)
Wear radiation monitoring device(s) while on duty
Document personal radiation exposure
Question female patients about possible pregnancy and alert physician
Remove all unnecessary persons from area prior to taking radiograph
Perform safety checks of radiographic equipment and accessories (e.g., lead aprons and gloves, collimator accuracy)
Place protective shield(s) over patient's radio-sensitive organs prior to exposure
Minimize personal and patient radiation exposure through principles of time, distance, and shielding
Demonstrate appropriate infection control technique(s) when radiographing a patient in isolation
Report radiologic accidents and/or spills immediately to proper authorities
Identify need for medical attention and administer emergency care to patient in critical situation, bleeding, epileptic seizure, contrast media reactions; respiratory/cardiac distress)

Competency: **Demonstrate knowledge of equipment**

Competency Builders:

Demonstrate the function of a diagnostic x-ray unit
Demonstrate the function of a fluoroscopic unit
Demonstrate the function of a portable x-ray unit
Demonstrate the function of a portable c-arm unit

Competency: **Demonstrate general knowledge of diagnostic radiology procedures**

Competency Builders:

Describe common radiological procedures
Describe common fluoroscopic procedures
Describe common mammography procedures
Describe common computerized tomography procedures
Describe common magnetic resonance procedures
Describe common sonography procedures
Describe common special procedures
Describe common nuclear medicine procedures
Describe common quality assurance procedures
Describe common radiation therapy procedures

Competency: **Ready equipment and materials for radiographic procedures**

Competency Builders:

Warm up x-ray tube to achieve proper operating conditions
Measure appropriate patient parts for requested examination
Identify appropriate exposure factors
Modify exposure factors for circumstances (e.g., body hibitus, voluntary and involuntary motion, pathological conditions)
Restrict beam exposure to area of interest
Set appropriate exposure factors to achieve optimum image quality
Perform radiographic examination in a sequence which avoids or minimizes undesirable effects
Check radiographs to verify they contain proper identification and are of diagnostic quality
Identify corrective measure if radiograph is not of diagnostic quality
Clean patient and/or equipment to remove anything that might interfere with radiograph quality
Assist physician in fluoroscopy by preparing the fluoroscopic unit and accessories for use and by adjusting controls as requested
Utilize sterile techniuq
Respond to malfunctioning medical equipment
Clean facilities and equipment
Disinfect or sterilize facilities and equipment
Dispose of contaminated items in preparation for next examination
Report malfunctions in radiographic unit
Differentiate among contrast media
Prepare contrast media accurately when appropriate
Obtain immobilization devices when necessary
Obtain adequate cassettes and accessories

Competency: **Perform radiographic equipment check procedures**

Competency Builders:

Clean facilities and equipment
Disinfect or sterilize facilities and equipment
Dispose of contaminated items in preparation for next examination
Report malfunctions in radiographic unit

Competency: Provide accurate radiographic record identification and retrieval

Competency Builders:

Record required information following performance examination
Retrieve radiographic patient records (e.g., radiographs or reports)
Identify patient using information on request form
Confirm patient's identity by checking wristband and/or by questioning patient
Imprint proper patient identification and markers onto film
Verify correctness of patient identification and markers on film
Combine radiographic requisition with radiographs for interpretation and filing
Check radiographic requisition to verify accuracy of information

Competency: Ready patient for radiographic procedures

Competency Builders:

Elicit patient history which might indicate a risk or a reaction (e.g., allergies, tape sensitivities; injection of iodinated contrast media)
Identify need for medical attention and administer emergency care to patient in critical situation (e.g., bleeding; epileptic seizure, contrast media reactions; respiratory/cardiac stress)
Assist patient in moving, transferring and ambulating
Explain procedure to patient to relieve anxiety and gain patient's cooperation during procedures
Give patient appropriate breathing instructions prior to making exposure
Assist physician in observing vital signs
Use body landmarks and standard radiographic positions to expose the desired anatomical part(s)
Assist physician with radiographic procedure if requested
Monitor medical equipment attached to patient (e.g., IVs, oxygen) while in radiology department

Competency: Perform radiographic procedures

Competency Builders:

Apply universal precautions
Align patient, radiographic/fluoroscopic unit, and image receptor to product images of requested anatomical structures/systems
Use immobilizaton devices as needed
Use body landmarks and standard radiographic positions to expose the desired anatomical part(s)
Initiate rotor prior to making exposure
Give patient appropriate breathing instructions prior to making exposure
Check radiographs to assure optimum diagnostic image quality to include density, contrast, detail, distortion, and positioning
Identify corrective measure if radiograph is not of diagnostic quality

Competency: Perform venipuncture and IV management

Competency Builders:

Differentiate venous from arterial vessel
Locate appropriate site for venuous access
Prepare skin using aseptic technique
Introduce needle/catheter to selected vein
Monitor site for extravasation
Discontinue IV
Administer IV contrast material

Competency: Expose radiographic film

Competency Builders:

Follow manufacturer's instructions for film and equipment placement
Adjust radiographic factors on x-ray equipment
Apply infection control procedures
Position patient, radiographic/fluoroscopic unit, and image receptor to produce images of requested anatomical structures/systems
Use immobilization devices as needed

Competency: **Process exposed radiographic film**

Competency Builders:

Follow manufacturer's instructions for x-ray processors and solutions
Mix solutions for developing and fixing radiographic film
Follow darkroom procedures
Unload cassettes
Handle film properly
Read thermometer
Interpret time and temperature chart
Load film into processor
Follow safety precautions to prevent eye injury and minor burns
Dispose of mixed solutions in accordance with EPA regulations
Reload cassettes
Clean equipment
Monitor performance of automatic processor using sensitometry
Report malfunctions in automatic processor

Competency: **Store radiographs and unexposed film**

Competency Builders:

Handle film(s) properly
Hang radiographs on viewboxes in proper orientation
File radiographs
Check expiration date
Store exposed and unexposed film properly

Competency: **Maintain supply inventory**

Competency Builders:

Identify supplies to be kept in stock
Identify appropriate stock levels
Organize supplies
Re-order supplies
Maintain a clean working environment

Respiratory Care Therapist

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	**Page**
Employability Skills	RCT-3
Professionalism	RCT-8
Teamwork	RCT-12
Computer Literacy	RCT-14
Documentation	RCT-15
Infection Control and Risk Management	RCT-16
Medical Terminology	RCT-23
Anatomy, Physiology, and Pathology	RCT-24
Medical Law and Ethics	RCT-31
Psychology of Stress	RCT-33
Psychology of Human Relations	RCT-35
First Aid and Medical Emergencies	RCT-38
General Administrative Duties	RCT-40
Vital Signs	RCT-46
Nutrition	RCT-49
Basic Pharmacology	RCT-51
Patient Education	RCT-53
Examinations	RCT-55
Respiratory Care	RCT-60

DON'T FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: Develop a career plan

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: Prepare for employment

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: Evaluate the importance of self-esteem as an employability skill

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: Project professional image

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: Achieve individual and professional goals

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: Manage personal finances

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: **Manage stressful situations**

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: **Analyze effects of family on work and work on family**

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: **Apply lifelong learning skills**

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: Manage professional development

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: Use teamwork to solve problems

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: Conduct team meetings

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: **Demonstrate proficiency in technical documentation**

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: **Demonstrate proficiency in technical report writing**

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: Comply with local, state, and federal regulations

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: Maintain personal safety and hygiene

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: **Maintain patient safety**

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: **Explain sexually transmitted diseases (STDs)**

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: Use common medical symbols, abbreviations, and acronyms

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: Demonstrate knowledge of medical terminology

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: **Demonstrate general knowledge of basic chemistry**

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: **Demonstrate general knowledge of the human body**

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: **Demonstrate knowledge of the circulatory/cardiovascular system**

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: **Demonstrate knowledge of the lymphatic system**

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: Demonstrate knowledge of the urinary system

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: Demonstrate knowledge of the reproductive system

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: Demonstrate knowledge of the senses

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: **Demonstrate knowledge of immunology**

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: Comply with medical law and ethics

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: Exhibit ethical behavior

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: Describe legal ramifications of misconduct

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: Practice discretion regarding patient information

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: Practice personal professional protocol with medical community

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: **Analyze factors that influence a patient's response to stress**

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: **Analyze physiological response to stress**

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: **Analyze psychological response to stress**

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: **Provide care for a patient with an ineffective coping response**

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: Explain human growth and development

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: Demonstrate appropriate communication techniques

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: Establish rapport

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: Use emergency procedures

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: Perform first aid

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: Respond to medical emergencies

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: Maintain medical records and laboratory reports

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: Prepare office communications

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: **Use office equipment**

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: **Demonstrate knowledge of different payment systems**

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: Perform diagnostic coding

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: Process insurance claims/forms

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: Perform financial functions

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Vital Signs

Competency: Interview patient

Competency Builders:

Complete patient information sheets
Record medical history (e.g., allergies, current medications)
Assess bio-psycho-social condition
Validate data with patient or patient's family member(s)

Competency: Measure temperature

Competency Builders:

Follow safety and aseptic precautions for taking temperature
Identify normal range and average temperature of oral, axillary, tympanic, and rectal methods of measuring body temperature
Identify factors that may affect temperature
Select route for measuring temperature
Demonstrate use of different types of thermometers
Record temperature measurements
Report abnormal temperature measurements
Maintain thermometer(s)

Competency: Measure pulse

Competency Builders:

Identify criteria for selecting pulse site (e.g., femoral, apical, radial)
Identify normal pulse range for different age groups
Identify factors that may affect pulse
Identify variations from normal pulse that should be reported
Record pulse

Competency: Measure respiration

Competency Builders:

Assess lung sounds
Measure rate, depth, and rhythm of respiration
Identify normal respiratory rate for different age groups
Report signs of compromised respiration
Identify factors that may affect respiration
Record respiration

Competency: Measure blood pressure

Competency Builders:

Identify myths and misconceptions related to blood pressure and hypertension
Identify etiology of hypertension
Identify consequences of untreated hypertension
Identify normal range of blood pressure for different age groups
Record blood pressure
Identify factors that affect blood pressure
Select appropriate cuff size
Describe the effect of inappropriate cuff size on accurate blood pressure reading
Identify variations from normal blood pressure that should be reported
Demonstrate use of aneroid sphygmomanometer gmomanometer
Demonstrate use of mercurial sphygmomanometer gmomanometer
Demonstrate palpated blood pressure

Competency: Obtain physical measurements

Competency Builders:

Measure adult height
Measure adult weight
Measure adult chest and waist expansion
Measure infant height
Measure infant weight
Measure infant head and chest circumference
Measure auditory status (e.g., tympanogram)
Measure visual status (e.g., eye chart)
Identify color blindness
Record all results

Unit: Nutrition

Competency: Identify fundamentals of nutrition

Competency Builders:

Identify nutrients and food groups
Explain role of nutrients to body functions
Explain regional, cultural, and religious food patterns
List factors which must be considered when purchasing food
Identify component of a balanced diet across the life span (e.g., USDA Food pyramid)
List factors which must be considered when storing food
Identify methods of food preparation
Instruct patient in sound nutrition principles

Competency: Identify nutritional needs related to special conditions and/or diseases

Competency Builders:

Describe common diets related to health alterations (e.g., pureed, mechanical-soft)
Describe special diets
Identify community resources
Identify risks of non-compliance with dietary restrictions
Educate patient regarding dietary hazards (e.g., caffeine, fats)

Competency: Draw correlation between diet and exercise

Competency Builders:

Identify methods of exercise
Explain effect of exercise and food on energy level
Write an exercise plan
Identify weight-related issues

Competency: **Identify facets of alternative nutrition**

Competency Builders:

Identify indications and effects of tube feedings
Identify indications and effects of intravenous fluids
Identify indications and effects of lipids
Identify indications and effects of hyperal

Unit: Basic Pharmacology

Competency: Maintain supply of medications

Competency Builders:

Check inventory stock
Contact supplier
Rotate stock
Process narcotic forms (i.e., Drug Enforcement Agency (DEA) license)
Store medications properly
Prepare expired medications for disposal
Dispose of medications properly (i.e., comply with government regulations)

Competency: Calculate dosage according to physician's orders

Competency Builders:

Verify accuracy of medical orders
Use Physician's Desk Reference (PDR)
Transcribe medication order
Calculate oral dosage
Calculate parenteral dosage
Calculate sublingual dosage
Calculate pediatric dosage
Calculate intravenous dosage and rate of flow

Competency: Instruct patients on use of medications

Competency Builders:

Provide verbal and/or written instructions for medication use
Explain use of medications (e.g., identify side effects, adverse effects, interactions)
Maintain standing orders according to physician's protocol (e.g., prescription refills)

Competency: Dispense medications according to medical orders

Competency Builders:

Identify patient
Verify patient allergies
Use reference materials
Verify accuracy of medical orders
Calculate dosages
Prepare oral medication
Identify correct anatomical sites
Prepare intramuscular, intradermal, and subcutaneous injectable medications
Prepare and administer sublingual medications
Prepare transdermal medications
Prepare inhalant medications
Prepare instillation medications
Prepare and administer topical medications
Prepare and administer rectal medications
Prepare and administer vaginal medications
Assist with administration of local anesthesia
Administer medications
Document medication administration
Document patient response to medications

Competency: Evaluate response to medication

Competency Builders:

Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medication

Unit: Patient Education

Competency: Inform patient/family about diagnostic procedures

Competency Builders:

Distribute literature regarding advised procedure
Explain diagnostic procedures
Explain preparation for diagnostic procedures
Translate medical terminology into lay terms
Distribute resource materials related to test results
Schedule patient follow-up
Obtain informed consent signature

Competency: Educate patient/responsible party about self-care related to results of diagnostic procedure/therapy

Competency Builders:

Identify support groups and resources
Obtain verbal and written information to plan patient's care
Reinforce special diets with patient/responsible party
Reinforce recommended exercise programs with patient/responsible party
Reinforce specialized applications (e.g., ortho, dietary, ostomy, splints, orthotics) with patient/responsible party
Reinforce self-administration of medications with patient/responsible party
Reinforce health maintenance techniques with patient/responsible party
Refer patient/responsible party to support groups and resources
Solicit patient/responsible party feedback
Record teaching and patient response
Instruct patient/responsible party in necessary adaptations to environment
Instruct patient/responsible party in adaptive techniques (e.g., activities of daily living, homemaking)

Competency: Provide psycho-social care for patient/family

Competency Builders:

Arrange emotional support for patient and family member(s)
Report child abuse and/or neglect
Respond to emotional needs of terminally ill patient and family member(s)
Apply reality orientation technique
Arrange diversional activity for patient

Competency: Inform patient about World Health Organization (WHO) immunization requirements

Competency Builders:

Instruct patient/family on infant, preschool, adolescent, and adult immunizations
Instruct patient/family on international requirements
Reinforce instructions from other health professionals to patient/family member(s)

Unit: Examinations

Competency: Demonstrate general knowledge of diagnostic studies

Competency Builders:

Describe the various methods of examining patients
Explain the functions of commonly used examining instruments
Describe the sequence of steps in a general physical examination
Identify various patient positions used in examinations
Identify common diagnostic blood tests performed in the medical laboratory
Differentiate between cultures and smears used in bacteriology
Identify sources from which cultures and smears may be obtained
Describe common radiological and sonographic studies and imaging techniques
Identify the purposes of nuclear medicine
Identify common cardiopulmonary diagnostic examinations
Identify common neurological diagnostic examinations

Competency: Demonstrate principles of body mechanics and ergonomics

Competency Builders:

Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient
Assist patient in and out of wheelchair
Assist patient with crutches
Assist patient with cane
Assist patient with walker
Assist patient with standing
Assist patient with cast or splints
Assist patient to bathroom
Position patient using supportive devices (e.g., pillows, footboards)
Perform ROM (i.e., range of motion)

Competency: Assist with general examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Change paper on examination table
Provide for patient privacy
Prepare patient for examination
Communicate with patient with special needs (e.g., hearing or vision disorder)
Inventory personal property
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Competency: Assist with eye, ear, nose, and throat examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with and chart eye irrigation
Assist with and chart ear irrigation
Assist with and chart tympanometry
Assist with and chart laryngoscopy
Describe taste bud reactions
Conduct visual screening
Conduct auditory screening
Administer eye, ear, and nose medications
Clean examination room after procedure

Competency: Assist with obstetric and gynecological examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Obtain cytology history
Assist with Pap smear
Instruct patient in self breast examination
Clean examination room after procedure

Competency: Assist with pediatric examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Record measurements on growth chart
Record immunizations
Apply restraints when needed (e.g., papoose board)
Clean examination room after procedure

Competency: Assist with proctology and gastrology examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with proctoscopy
Clean examination room after procedure

Competency: Assist with orthopedic examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment (e.g., soaks)
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with casting and splinting procedures
Demonstrate use of ambulatory aids
Assist patient in wheelchair transfer to and from examination table
Clean examination room after procedure

Competency: Assist with neurological examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Competency: Assist with geriatric examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Unit: Respiratory Care

Competency: Identify respiratory care uses

Competency Builders:

List areas in which respiratory therapy is involved with patient services
Describe the rationale for lung expansion therapy
List categories of diagnostic and patient monitoring procedures
List procedures provided by respiratory therapy
List conditions/diseases of patients who receive respiratory therapy treatment
List indications for oxygen therapy
List indications for aerosol and humidity administration
List indications for the use of chest percussion/chest physiotherapy
List indications for naso-tracheal, endotracheal, tracheal suctioning
List goals of pulmonary rehabilitation and patient education
Differentiate between educational programs of various respiratory care practitioners

Competency: Prepare non-life support respiratory therapy equipment for patient use

Competency Builders:

Explain purpose and applicaton of non-life support equipment
Identify components and ancillary equipment of non-life support equipment
Identify oxygen administration devices
Identify aerosol generators, croup tents, and vaporizer
Identify humidifiers
Identify gas delivery, metering, and analyzing devices
Identify vacuum system components
Identify patient breathing circuits
Identify manometers and gauges
Verify proper assembly of non-life support equipment
Disassemble non-life support equipment

Competency: Prepare life-support equipment for patient use

Competency Builders:

Explain purpose and appl,ication of life-support equipment
Identify life-support equipment
Identify the components and ancillary equipment of life-support equipment
Verify proper assembly of life-support equipment
Disassemble life-support equiopment for cleaning
Identify and apply appropriate ventilation mode
Maintain appropriate parameters as related to clinical status
Discontinue life support as required
Identify safety features
Identify alarms
Identify electrical and pneumatic supplies to ventilator
Set-up ventilator
Perform calculations
Assess proper function
Perform ventilation system check

Competency: Manage airway

Competency Builders:

Insert and manage ET tube
Insert and manage trach tube
Insert and manage oral airways
Insert and manage nasopharyngeal
Suctioning of/care of laryngoscope equipment, inteubation, extubation, trach buttons, speaking valve
Identify correct tube placement

Competency: Perform rehabilitation

Competency Builders:

Instruct pursed lip breathing
Instruct diaphragmatic breathing
Instruct cought control
Instruct diet
Instruct exercise conditioning
Instruct activities of daily living
Instruct bronchial hygiene techniques
Instruct smoking cessation

Competency: Manage pharmacological agents

Competency Builders:

Administer and evaluate steroids
Administer and evaluate bronchodilators
Administer and evaluate antiviral
Administer and evaluate mucolytics
Administer and evaluate antibiotics
Administer and evaluate bronchoconstrictors
Administer and evaluate nicotene therapy
Administer and evaluate artificial surfactant
Administer and evaluate antipneumocystis
Administer and evaluate topical anesthetics
Administer and evaluate expectorants
Administer and evaluate vasoconstrictors
Administer and evaluate mast cell stabilizer

Competency: Perform assessment

Competency Builders:

Assess level of consciousness
Evaluate level of activity
Assess WOB (i.e., work of breathing)
Evaluate cough
Obtain smoking history
Assess occupational exposure
Obtain family history
Measure chest excursion
Assess level of dyspnea
Assess color
Assess clubbing of fingers
Assess use of accessory muscles
Assess position (e.g., tripoding)
Assess breathing patterns (e.g., Cheynes Stokes)
Assess breath sounds (e.g., wheeze, rhonchi, rales)
Interpret lab values
Evaluate chest radiograph
Obtain and evaluate sputum cultures
Obtain and evaluate EKG

Competency: Prepare diagnostic equipment for patient use

Competency Builders:

Explain purpose and application of diagnostic equiopment
Identify diagnosit equipment
Identify the components and ancillary equipment of diagnostic equipment
Assemble portable spirometers and electronic devices used to record
    flow, compliance, resistance, rate, and volume for patient use
Disassemble portable spirometers, and electronic devices used to record
    flow, compliance, resistance, rate, and volume for cleaning
Identify volume and capacity
Identify major pulmonary tests
Identify equipment use for pulmonary function testing
Calibrate testing equipment
Solicit patient cooperation
Use equipment to test pulmonary function
Calibrate testing equipment
Solicit patient cooperation
Evaluate test validity and reliability
Perform a 12-lead EKG
Identify parts of Swan Ganz catheter
Identify arterial blood catheter
Identify techniques used for hemodynamic monitoring
Perform calculations using data collected from catheters
Demonstrate ABGs/co-oximetry equipment
Demonstrate pulse oximetry equipment
Demonstrate transcutaneous O_2 and CO_2 equipment
Demonstrate end tidal CO_2 equipment

Competency: **Demonstrate proper procedures for using flowmeters, regulators, gauges, and compressed gas cylinders**

Competency Builders:

Identify the potential dangers associated with the use and transportation of oxygen
Identify safety measures associated with the use, transportation, and storage of oxygen
Outline the procedures for handling, maintaining, storing, and transporting flowmeters, regulators, gauges, and compressed gas cylinders
List methods by which medical gas cylinders are identified
Identify medical gases

Competency: **Disinfect or sterilize respiratory therapy equipment**

Competency Builders:

Define particulates, bacteria, viruses, fungi, rickettsiae, and spores
Describe infectious hazards regarding respiratory therapy equipment
Differentiate between disposable and reusable equipment
Package components and ancillary equipment for sterilization
Identify methods for sterilizing and disinfecting reusable equipment
Outline proper cleaning, disinfecting, and sterilizing methods
Demonstrate safe practice in cold liquid disinfection and sterilization
Demonstrate safe practice in gas sterilization
Explain how spore strip is used in guarantee sterilization of equiopment
Explain why proper dating of sterilized equipment is necessary
Explain why proper documentaion of disinfection and sterilization procedures is necessary to protect hospital patients
Identify circumstances which would warrant replacement of liquid disinfectant/sterilization agents

Competency: **Change non-life support equipment in patient care areas of a hospital**

Competency Builders:

Differentiate between life-support and non-life support equipment
Identify safety measures to be taken before, during, and after changing non-life support equipment
Demonstrate proper communications with the patient whose equipment is being changed
Outline procedure for changing an oxygen delivery device which is in use on a patient
Verify proper operation of non-life support equipment

Competency: **Demonstrate proper procedures for changing flowmeters, regulators, gauges, and compressed gas cylinders**

Competency Builders:

List indications for O_2 therapy
Identify and utilize O_2 administration devices
Identify and utilize gas delivery and analyzing device, metering
Identify and utilize the potential dangers, safety measures and procedures associated with the use, transportation and storage of medical gases
List methods by which medical gas cylinders are identified
Differentiate Pin Index Safety System, Diameter Index Safety System and Compressed Gas Association (CGA) Safety System
Read cylinder pressure remaining in medical compressed gas cylinder and calculate duration
Identify tools necessary to remove the regulator from a compressed gas cylinder
List possible hazards involved in changing the regulator on a compressed gas cylinder
Explain procedure for changing flowmeters, regulators, gauges, and compressed gas cylinders
Verify proper operation of flowmeters, regulators, gauges, and compressed gas cylinders
Define bulk gas system
Define and identify the components of a manifold system
Define and identify the components of a piping delivery system
Identify items to be monitored in a bulk manifold compressed gas system

Competency: **Test respiratory therapy equipment for proper operation and patient readiness**

Competency Builders:

Verify that equipment components are assembled properly with all necessary accessories
Check safety check of all components
Check equipment components for cleanliness and/or appropriate disinfection or sterilization and packaging
Verify all equipment functions as required
Document faulty or defective equipment
Troubleshoot equipment for proper function
Change equipment as needed

Competency: **Demonstrate proper safety precautions in the transport and delivery of equipment**

Competency Builders:

Outline methods of safe movement of equipment through a hospital environment
Identify potential hazards associated with the movement of respiratory therapy equipment through the hospital environment
Identify safety measures related to the delivery and placement of the equipment in patient care areas of a hospital environment

Competency: **Transport samples to laboratory**

Competency Builders:

Describe procedure for delivering arterial blood gas samples to the laboratory for analysis
Describe procedure for delivering sputum samples to the laboratory for analysis

Competency: Perform hemodynamic monitoring

Competency Builders:

Identify parts of Swan Ganz catheter
Identify arterial blood catheter
Identify techniques used for hemodynamic monitoring
Perform calculations using data collected from catheters

Competency: Operate mechanical ventilator

Competency Builders:

Identify safety features
Identify alarms
Identify electrical and pneumatic supplies to ventilator
Set-up ventilator
Perform calculations
Assess proper function
Perform ventilation system check

Competency: Perform pulmonary function tests

Competency Builders:

Identify volume and capacity
Identify major pulmonary tests
Identify equipment use for pulmonary function testing
Calibrate testing equipment
Solicit patient cooperation
Use equipment to test pulmonary function

Competency: Perform electrocardiograms

Competency Builders:

Calibrate testing equipment
Solicit patient cooperation
Evaluate test validity and reliability
Perform a 12-lead EKG

Competency: Evaluate chest x-rays

Competency Builders:

Identify normal versus abnormal
Identify tube placements
Identify relationship to pulmonary diseases

Competency: Explain pulmonary pathology

Competency Builders:

Identify common diseases
Identify diagnostic criteria
Identify accepted treatments

Competency: Plan for discharge

Competency Builders:

Recognize need and arrange for referrals
Conduct home visits
Develop plan of service
Develop plan of care
Assess medical necessity
Demonstrate use and care of home respiratory equipment

Competency: Prepare or demonstrate special procedures

Competency Builders:

Assist with bronchoscopy
Assist with thoracentesis
Perform pulmonary and cardiac stress testing
Assist cardioversion
Perform defibrillation
Assist transtracheal aspiration
Manage transtracheal catheters
Perform sleep apnea studies
Manage apnea monitors
Manage chest tubes
Manage chest drainage systems
Perform metabolic studies/indirect calorimetry

Competency: Demonstrate therapeutic modalities

Competency Builders:

Demonstrate small volume aersol and list indications
Demonstrate large volume aersol and list indications
Demonstrate ultra sonic nebulizer and list indications
Demonstrate chest percussion and list indications
Demonstrate lung expansion and list indications
Demonstrate noninvasive ventilation and list indications
Demonstrate dose inhalers and spacers and list indications

Occupational Therapy Assistant

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	**Page**
Employability Skills	OTA-3
Professionalism	OTA-8
Teamwork	OTA-12
Computer Literacy	OTA-14
Documentation	OTA-15
Infection Control and Risk Management	OTA-16
Medical Terminology	OTA-23
Anatomy, Physiology, and Pathology	OTA-24
Medical Law and Ethics	OTA-31
Psychology of Stress	OTA-33
Psychology of Human Relations	OTA-35
First Aid and Medical Emergencies	OTA-38
General Administrative Duties	OTA-40
Vital Signs	OTA-46
Nutrition	OTA-49
Patient Education	OTA-51
Occupational Therapy	OTA-53

~~DON'T~~ FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: **Develop a career plan**

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: Prepare for employment

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: Evaluate the importance of self-esteem as an employability skill

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: Project professional image

Competency Builders:

- Define professionalism
- Exhibit professional appearance
- Exhibit professional manners
- Project professional attitude
- Identify individuals' vital role in organization
- Exhibit proper etiquette in professionally-related situations

Competency: Achieve individual and professional goals

Competency Builders:

- Set flexible, realistic, and measurable goals
- Identify potential barriers to achieving goals
- Identify strategies for addressing barriers to goal achievement
- Breakdown long-term goals into short-term goals
- Prioritize goals
- Commit to goals
- Adjust goals
- Obtain support for goals
- Reward goal achievement

Competency: Manage personal finances

Competency Builders:

- Explain need for personal management records
- Balance checkbook
- Identify tax obligations
- Analyze how credit affects financial security
- Compare types and methods of investments
- Compare types and methods of borrowing
- Compare types and methods of insurance
- Compare types of retirement options/plans
- Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: **Manage stressful situations**

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: **Analyze effects of family on work and work on family**

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: **Apply lifelong learning skills**

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: Manage professional development

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: Use teamwork to solve problems

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: Conduct team meetings

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: Demonstrate proficiency in technical documentation

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: Demonstrate proficiency in technical report writing

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: Comply with local, state, and federal regulations

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: Maintain personal safety and hygiene

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: **Demonstrate general knowledge of basic chemistry**

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: **Demonstrate general knowledge of the human body**

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: Demonstrate knowledge of the circulatory/ cardiovascular system

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: Demonstrate knowledge of the lymphatic system

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: Demonstrate knowledge of the urinary system

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: Demonstrate knowledge of the reproductive system

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: Demonstrate knowledge of the senses

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: **Demonstrate knowledge of immunology**

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: Comply with medical law and ethics

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: Exhibit ethical behavior

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: Describe legal ramifications of misconduct

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: **Practice discretion regarding patient information**

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: **Practice personal professional protocol with medical community**

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: **Analyze factors that influence a patient's response to stress**

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: **Analyze physiological response to stress**

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: **Analyze psychological response to stress**

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: **Provide care for a patient with an ineffective coping response**

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: Explain human growth and development

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: Demonstrate appropriate communication techniques

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: Establish rapport

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: Use emergency procedures

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: Perform first aid

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: **Respond to medical emergencies**

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: Maintain medical records and laboratory reports

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: Prepare office communications

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: Use office equipment

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: Demonstrate knowledge of different payment systems

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: Perform diagnostic coding

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: Process insurance claims/forms

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: **Perform financial functions**

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Vital Signs

Competency: Interview patient

Competency Builders:

Complete patient information sheets
Record medical history (e.g., allergies, current medications)
Assess bio-psycho-social condition
Validate data with patient or patient's family member(s)

Competency: Measure temperature

Competency Builders:

Follow safety and aseptic precautions for taking temperature
Identify normal range and average temperature of oral, axillary, tympanic, and rectal methods of measuring body temperature
Identify factors that may affect temperature
Select route for measuring temperature
Demonstrate use of different types of thermometers
Record temperature measurements
Report abnormal temperature measurements
Maintain thermometer(s)

Competency: Measure pulse

Competency Builders:

Identify criteria for selecting pulse site (e.g., femoral, apical, radial)
Identify normal pulse range for different age groups
Identify factors that may affect pulse
Identify variations from normal pulse that should be reported
Record pulse

Competency: Measure respiration

Competency Builders:

Assess lung sounds
Measure rate, depth, and rhythm of respiration
Identify normal respiratory rate for different age groups
Report signs of compromised respiration
Identify factors that may affect respiration
Record respiration

Competency: Measure blood pressure

Competency Builders:

Identify myths and misconceptions related to blood pressure and hypertension
Identify etiology of hypertension
Identify consequences of untreated hypertension
Identify normal range of blood pressure for different age groups
Record blood pressure
Identify factors that affect blood pressure
Select appropriate cuff size
Describe the effect of inappropriate cuff size on accurate blood pressure reading
Identify variations from normal blood pressure that should be reported
Demonstrate use of aneroid sphygmomanometer gmomanometer
Demonstrate use of mercurial sphygmomanometer gmomanometer
Demonstrate palpated blood pressure

Competency: Obtain physical measurements

Competency Builders:

Measure adult height
Measure adult weight
Measure adult chest and waist expansion
Measure infant height
Measure infant weight
Measure infant head and chest circumference
Measure auditory status (e.g., tympanogram)
Measure visual status (e.g., eye chart)
Identify color blindness
Record all results

Unit: Nutrition

Competency: Identify fundamentals of nutrition

Competency Builders:

Identify nutrients and food groups
Explain role of nutrients to body functions
Explain regional, cultural, and religious food patterns
List factors which must be considered when purchasing food
Identify component of a balanced diet across the life span (e.g., USDA Food pyramid)
List factors which must be considered when storing food
Identify methods of food preparation
Instruct patient in sound nutrition principles

Competency: Identify nutritional needs related to special conditions and/or diseases

Competency Builders:

Describe common diets related to health alterations (e.g., pureed, mechanical-soft)
Describe special diets
Identify community resources
Identify risks of non-compliance with dietary restrictions
Educate patient regarding dietary hazards (e.g., caffeine, fats)

Competency: Draw correlation between diet and exercise

Competency Builders:

Identify methods of exercise
Explain effect of exercise and food on energy level
Write an exercise plan
Identify weight-related issues

Competency: **Identify facets of alternative nutrition**

Competency Builders:

Identify indications and effects of tube feedings
Identify indications and effects of intravenous fluids
Identify indications and effects of lipids
Identify indications and effects of hyperal

Unit: Patient Education

Competency: Inform patient/family about diagnostic procedures

Competency Builders:

Distribute literature regarding advised procedure
Explain diagnostic procedures
Explain preparation for diagnostic procedures
Translate medical terminology into lay terms
Distribute resource materials related to test results
Schedule patient follow-up
Obtain informed consent signature

Competency: Educate patient/responsible party about self-care related to results of diagnostic procedure/therapy

Competency Builders:

Identify support groups and resources
Obtain verbal and written information to plan patient's care
Reinforce special diets with patient/responsible party
Reinforce recommended exercise programs with patient/responsible party
Reinforce specialized applications (e.g., ortho, dietary, ostomy, splints, orthotics) with patient/responsible party
Reinforce self-administration of medications with patient/responsible party
Reinforce health maintenance techniques with patient/responsible party
Refer patient/responsible party to support groups and resources
Solicit patient/responsible party feedback
Record teaching and patient response
Instruct patient/responsible party in necessary adaptations to environment
Instruct patient/responsible party in adaptive techniques (e.g., activities of daily living, homemaking)

Competency: Provide psycho-social care for patient/family

Competency Builders:

Arrange emotional support for patient and family member(s)
Report child abuse and/or neglect
Respond to emotional needs of terminally ill patient and family member(s)
Apply reality orientation technique
Arrange diversional activity for patient

Competency: Inform patient about World Health Organization (WHO) immunization requirements

Competency Builders:

Instruct patient/family on infant, preschool, adolescent, and adult immunizations
Instruct patient/family on international requirements
Reinforce instructions from other health professionals to patient/family member(s)

Unit: Occupational Therapy

Competency: Assist with evaluation

Competency Builders:

Screen patient for need of evaluation
Explain evaluation plan
Conduct an interview
Administer standardized tests and evaluations
Analyze evaluation data
Formulate evaluation recommendations in consultation with Occupational Therapist, Registered (OTR)
Record evaluation information and recommendations

Competency: Define patient needs

Competency Builders:

Obtain data through patient/responsible party interview
Gather information from medical record
Observe patient
Document observations
Analyze activities of daily living, work, and leisure
Evaluate home and work site
Identify contraindications to treatment
Consult with occupational therapist
Identify need for intervention
Evaluate the effectiveness of therapy
Identify medications and potential side effects

Competency: Incorporate occupational therapy principles in planning

Competency Builders:

Identify normal growth and development
Identify accepted occupational therapy frames of reference
Identify methods to assist patient in maintaining/achieving maximal independence
Identify purposeful activities to include in plan
Demonstrate adaptability

Competency: Plan therapeutic measures

Competency Builders:

Gather data from assessments
Prioritize patient problems
Identify realistic goals
Identify length of time to achieve goals
Identify therapeutic procedures that have potential for achieving goals
Identify the influence of biological, psychological, cognitive, social and cultural factors on compliance and achievement of goals
Describe treatment methodology
Contribute to the development of the treatment plan
Explain plan of treatment and goals with patient/responsible party
Contribute to establishment of short and long term goals
Consult with occupational therapist
Document plan of care
Interpret doctor's orders
Participate in discharge planning
Identify follow-up care
Refer patient/responsible party to other community resources
Analyze tasks and activities
Assist specialist with selection of adaptive equipment
Design adaptive equipment
Build adaptive equipment
Document progress
Identify need to revise treatment plan
Identify need to terminate treatment

Competency: Use occupational therapy equipment

Competency Builders:

Identify need
Identify resources
Seek prescription or refer to outside source if needed
Obtain or write letter of justification
Issue or design and build equipment
Instruct patient/responsible party in the correct use of equipment
Assess performance of equipment
Adjust and modify equipment
Terminate equipment if applicable
Document outcome
Keep abreast of new equipment
Identify principles of using adaptive equipment

Competency: Use orthotics

Competency Builders:

Identify need
Consult with occupational therapist
Seek prescription or refer to outside source if needed
Identify sources for equipment and materials
Select or design a pattern
Select equipment and materials
Construct orthosis
Fit or modify orthosis
Write instructions for care and usage
Document outcome

Competency: Perform therapeutic measures

Competency Builders:

Analyze group dynamics
Collaborate with the occupational therapist on treatment implementation
Identify strategies to deal with agitated and/or aggressive behavior
Prepare therapy area
Prepare patient for treatment
Follow treatment plan
Monitor medical equipment attached to patient during treatment (e.g., O_2,
IV, catheters)
Modify patient's home or work environment
Design system of positive and negative reinforcement
Provide supportive environment with increasing stimulation
Assess reality orientation and reorient patient
Conduct group activities
Arrange for use of community and educational resources

Competency: Treat patient in functional activities

Competency Builders:

Instruct patient in eating and feeding
Instruct patient in dressing
Instruct patient in clothing care
Instruct patient in food preparation
Instruct patient in grooming and hygiene
Instruct patient in edema control techniques
Instruct patient in proper positioning techniques
Instruct patient in money management
Instruct patient in time-management
Instruct patient in shopping
Instruct patient in home-cleaning
Instruct patient in parental skills
Instruct patient in employment preparation
Instruct patient in functional communications
Instruct patient in object manipulation
Instruct patient in play and leisure activities
Instruct patient in relaxation techniques
Instruct patient in assertive behaviors
Instruct patient in energy conservation techniques
Instruct patient in joint protection techniques
Instruct patient in use of public transportation
Instruct patient in transfer techniques
Instruct patient in wheelchair mobility
Instruct patient in bed mobility
Instruct patient in use of orthosis
Instruct patient in use of prosthesis
Instruct patient in use of adaptive equipment
Retrain patient in hand dominance

Competency: Engage patient in purposeful activities

Competency Builders:

Involve patient in fine and gross motor coordination activities
Involve patient in strength activities
Involve patient in to social skill improvement activities
Involve patient in endurance activities
Involve patient in range of motion activities
Involve patient in reflex integration activities
Involve patient in sensory awareness activities
Involve patient in sensory motor integration activities
Involve patient in visual perception activities
Involve patient in body awareness activities
Involve patient in cognitive skill activities
Involve patient in cognitive integration skill activities
Involve patient in self-concept activities
Involve patient in situational coping skill activities
Involve patient in balance activities
Involve patient in community involvement activities

Competency: Provide therapy for different types of patients

Competency Builders:

Provide therapy for geriatric patients
Provide therapy for patients with development disabilities
Provide therapy for patients with physical dysfunction
Provide therapy for patients with sensory impairment
Provide therapy for patients with psycho-social dysfunction

Physical Therapist Assistant

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	**Page**
Employability Skills	**PTA-3**
Professionalism	**PTA-8**
Teamwork	**PTA-12**
Computer Literacy	**PTA-14**
Documentation	**PTA-15**
Infection Control and Risk Management	**PTA-16**
Medical Terminology	**PTA-23**
Anatomy, Physiology, and Pathology	**PTA-24**
Medical Law and Ethics	**PTA-31**
Psychology of Stress	**PTA-33**
Psychology of Human Relations	**PTA-35**
First Aid and Medical Emergencies	**PTA-38**
General Administrative Duties	**PTA-40**
Vital Signs	**PTA-46**
Nutrition	**PTA-49**
Patient Education	**PTA-51**
Physical Therapy	**PTA-53**

DON'T FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: Develop a career plan

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: **Prepare for employment**

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: **Evaluate the importance of self-esteem as an employability skill**

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: Project professional image

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: Achieve individual and professional goals

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: Manage personal finances

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: **Manage stressful situations**

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: **Analyze effects of family on work and work on family**

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: **Apply lifelong learning skills**

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: **Manage professional development**

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: Use teamwork to solve problems

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: Conduct team meetings

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: **Demonstrate proficiency in technical documentation**

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: **Demonstrate proficiency in technical report writing**

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: **Comply with local, state, and federal regulations**

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: **Maintain personal safety and hygiene**

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: Demonstrate general knowledge of basic chemistry

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: Demonstrate general knowledge of the human body

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: Demonstrate knowledge of the circulatory/ cardiovascular system

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: Demonstrate knowledge of the lymphatic system

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: Demonstrate knowledge of the urinary system

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: Demonstrate knowledge of the reproductive system

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: Demonstrate knowledge of the senses

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: **Demonstrate knowledge of immunology**

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: Compl[illegible] with medical law and ethics

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: Exhibit ethical behavior

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: Describe legal ramifications of misconduct

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: Practice discretion regarding patient information

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: Practice personal professional protocol with medical community

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: **Analyze factors that influence a patient's response to stress**

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: **Analyze physiological response to stress**

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: **Analyze psychological response to stress**

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: **Provide care for a patient with an ineffective coping response**

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: Explain human growth and development

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: Demonstrate appropriate communication techniques

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: Establish rapport

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: Use emergency procedures

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: Perform first aid

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: Respond to medical emergencies

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: Maintain medical records and laboratory reports

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: Prepare office communications

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: Use office equipment

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: Demonstrate knowledge of different payment systems

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: Perform diagnostic coding

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: Process insurance claims/forms

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: Perform financial functions

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Vital Signs

Competency: Interview patient

Competency Builders:

Complete patient information sheets
Record medical history (e.g., allergies, current medications)
Assess bio-psycho-social condition
Validate data with patient or patient's family member(s)

Competency: Measure temperature

Competency Builders:

Follow safety and aseptic precautions for taking temperature
Identify normal range and average temperature of oral, axillary, tympanic, and rectal methods of measuring body temperature
Identify factors that may affect temperature
Select route for measuring temperature
Demonstrate use of different types of thermometers
Record temperature measurements
Report abnormal temperature measurements
Maintain thermometer(s)

Competency: Measure pulse

Competency Builders:

Identify criteria for selecting pulse site (e.g., femoral, apical, radial)
Identify normal pulse range for different age groups
Identify factors that may affect pulse
Identify variations from normal pulse that should be reported
Record pulse

Competency: Measure respiration

Competency Builders:

Assess lung sounds
Measure rate, depth, and rhythm of respiration
Identify normal respiratory rate for different age groups
Report signs of compromised respiration
Identify factors that may affect respiration
Record respiration

Competency: Measure blood pressure

Competency Builders:

Identify myths and misconceptions related to blood pressure and hypertension
Identify etiology of hypertension
Identify consequences of untreated hypertension
Identify normal range of blood pressure for different age groups
Record blood pressure
Identify factors that affect blood pressure
Select appropriate cuff size
Describe the effect of inappropriate cuff size on accurate blood pressure reading
Identify variations from normal blood pressure that should be reported
Demonstrate use of aneroid sphygmomanometer gmomanometer
Demonstrate use of mercurial sphygmomanometer gmomanometer
Demonstrate palpated blood pressure

Competency: Obtain physical measurements

Competency Builders:

Measure adult height
Measure adult weight
Measure adult chest and waist expansion
Measure infant height
Measure infant weight
Measure infant head and chest circumference
Measure auditory status (e.g., tympanogram)
Measure visual status (e.g., eye chart)
Identify color blindness
Record all results

Unit: Nutrition

Competency: Identify fundamentals of nutrition

Competency Builders:

Identify nutrients and food groups
Explain role of nutrients to body functions
Explain regional, cultural, and religious food patterns
List factors which must be considered when purchasing food
Identify component of a balanced diet across the life span (e.g., USDA Food pyramid)
List factors which must be considered when storing food
Identify methods of food preparation
Instruct patient in sound nutrition principles

Competency: Identify nutritional needs related to special conditions and/or diseases

Competency Builders:

Describe common diets related to health alterations (e.g., pureed, mechanical-soft)
Describe special diets
Identify community resources
Identify risks of non-compliance with dietary restrictions
Educate patient regarding dietary hazards (e.g., caffeine, fats)

Competency: Draw correlation between diet and exercise

Competency Builders:

Identify methods of exercise
Explain effect of exercise and food on energy level
Write an exercise plan
Identify weight-related issues

Competency: Identify facets of alternative nutrition

Competency Builders:

Identify indications and effects of tube feedings
Identify indications and effects of intravenous fluids
Identify indications and effects of lipids
Identify indications and effects of hyperal

Unit: Patient Education

Competency: Inform patient/family about diagnostic procedures

Competency Builders:

Distribute literature regarding advised procedure
Explain diagnostic procedures
Explain preparation for diagnostic procedures
Translate medical terminology into lay terms
Distribute resource materials related to test results
Schedule patient follow-up
Obtain informed consent signature

Competency: Educate patient/responsible party about self-care related to results of diagnostic procedure/therapy

Competency Builders:

Identify support groups and resources
Obtain verbal and written information to plan patient's care
Reinforce special diets with patient/responsible party
Reinforce recommended exercise programs with patient/responsible party
Reinforce specialized applications (e.g., ortho, dietary, ostomy, splints, orthotics) with patient/responsible party
Reinforce self-administration of medications with patient/responsible party
Reinforce health maintenance techniques with patient/responsible party
Refer patient/responsible party to support groups and resources
Solicit patient/responsible party feedback
Record teaching and patient response
Instruct patient/responsible party in necessary adaptations to environment
Instruct patient/responsible party in adaptive techniques (e.g., activities of daily living, homemaking)

Competency: Provide psycho-social care for patient/family

Competency Builders:

Arrange emotional support for patient and family member(s)
Report child abuse and/or neglect
Respond to emotional needs of terminally ill patient and family member(s)
Apply reality orientation technique
Arrange diversional activity for patient

Competency: Inform patient about World Health Organization (WHO) immunization requirements

Competency Builders:

Instruct patient/family on infant, preschool, adolescent, and adult immunizations
Instruct patient/family on international requirements
Reinforce instructions from other health professionals to patient/family member(s)

Unit: Physical Therapy

Competency: Define patient needs

Competency Builders:

Obtain data through patient/responsible party interview
Gather information from medical record
Observe patient
Identify activities of daily living, work, and leisure
Identify architectural barriers to patient mobility
Identify contraindications for treatment
Identify need for intervention (e.g., occupational therapy, speech therapy)
Adjust treatment activities in accordance with patient tolerance
Demonstrate proper methods of positioning and draping patient
Provide for patient privacy

Competency: Monitor patient progress

Competency Builders:

Perform goniometry
Record measurements (e.g., wounds, edema, atrophy)
Describe progress as defined by goals
Define changes in patient status (e.g., strength, pain, functional skills)
Document progress in patient's record

Competency: Develop therapeutic interventions

Competency Builders:

Gather data from assessments
Prioritize patient problems
Identify realistic goals
Identify length of time to achieve goals
Identify therapeutic procedures that have potential for achieving goals
Identify the influence of biological, psychological, cognitive, social, and cultural factors on compliance and achievement of goals
Contribute to the development of the treatment plan
Explain plan of treatment and goals to patient responsible party
Consult with physical therapist (e.g., treatment termination)
Review prescribed orders
Refer to other community resources as needed
Participate in discharge planning
Identify medications and potential side effects

Competency: Perform therapeutic measures

Competency Builders:

Collaborate with the physical therapist
Prepare treatment area
Prepare equipment and modalities
Prepare patient for treatment
Explain indications, contraindications and possible side effects of treatment
Assist patient with relaxation exercises
Assist patient with strengthening exercises
Assist patient with range of motion exercises
Assist patient with endurance exercises
Assist patient with balance exercises
Assist patient with gross motor coordination
Assist patient with gait training
Assist patient with neurological techniques (e.g., NOT, PNF)
Perform manual therapy techniques
Instruct patient in functional activities (e.g., mobility, transfers)
Assist patient with work-hardening activities
Assist with paraffin treatment
Assist with hydrotherapy
Assist with fluidotherapy

Competency: Perform therapeutic measures (continued)

Competency Builders:

Assist with diathermy
Assist with contrast bath
Apply hot packs
Apply cold therapy (e.g., cryotherapy)
Perform ultrasound techniques
Apply therapeutic electrical stimulation (e.g., TENS, MENS, NMES)
Apply ultraviolet treatment
Apply mechanical traction
Apply intermittent venous compression
Assist with prosthetic training
Assist with use of orthotics
Measure for custom pressure gradient garments
Assist with use of pressure garments
Apply bandages
Apply dressings
Perform would debridement
Perform therapeutic massage
Perform tilt table treatment
Assist in set-up and removal of electromylogram (EMG) biofeedback equipment
Monitor patient use of therapeutic equipment
Instruct patient in use of body mechanics
Monitor medical equipment attached to patient during treatment (e.g., oxygen, IVs, catheters, drainage tubes)

Competency: Demonstrate basic knowledge of kinesiology

Competency Builders:

Define terminology related to kinesiology
Explain the basis for structural kinesiology
Identify all bones in the appendicular skeleton
Identify the thorax, vertebral column, and skull in the axial skeleton
Identify the types of joints and their respective movements
Explain basic mechanics of muscular action (i.e., structural muscle types, attachments, types of contractions, and neuromuscular basis)
List actions of particular muscles, including origin and insertion in shoulder girdle, shoulder joint, elbow, wrist, hand, fingers, hip joint, knee joint, ankle/foot, and cervical, thoracic, and lumbar spine
Perform muscular analysis of selected exercises and activities
Describe selected exercises and activities using skeletal, muscular, and movement terminology and muscular analysis
Describe methods of inhibition or facilitation of motor responses and principles of sensory integration
Explain basic skills of athletic performance and physical fitness

Registered Nurse (Associate Degree)

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	Page
Employability Skills	RNA-3
Professionalism	RNA-8
Teamwork	RNA-12
Computer Literacy	RNA-14
Documentation	RNA-15
Infection Control and Risk Management	RNA-16
Medical Terminology	RNA-23
Anatomy, Physiology, and Pathology	RNA-23
Medical Law and Ethics	RNA-31
Psychology of Stress	RNA-33
Psychology of Human Relations	RNA-35
First Aid and Medical Emergencies	RNA-38
General Administrative Duties	RNA-40
Vital Signs	RNA-46
Nutrition	RNA-49
Basic Pharmacology	RNA-51
Patient Education	RNA-53
Examinations	RNA-55
Laboratory Tests and Diagnostic Procedures	RNA-60
Nursing Process	RNA-66
Nursing Communication	RNA-71
Nursing Clinical Procedures	RNA-76
Advanced Nursing Concepts	RNA-81
Medication Use	RNA-84

DON'T FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: Develop a career plan

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: Prepare for employment

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: Evaluate the importance of self-esteem as an employability skill

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: Project professional image

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: Achieve individual and professional goals

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: Manage personal finances

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: **Manage stressful situations**

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: **Analyze effects of family on work and work on family**

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: **Apply lifelong learning skills**

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: **Manage professional development**

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: Use teamwork to solve problems

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: Conduct team meetings

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: Demonstrate proficiency in technical documentation

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: Demonstrate proficiency in technical report writing

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: **Comply with local, state, and federal regulations**

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: Maintain personal safety and hygiene

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: Demonstrate general knowledge of basic chemistry

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: Demonstrate general knowledge of the human body

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: **Demonstrate knowledge of the circulatory/cardiovascular system**

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: **Demonstrate knowledge of the lymphatic system**

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: **Demonstrate knowledge of the urinary system**

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: **Demonstrate knowledge of the reproductive system**

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: **Demonstrate knowledge of the senses**

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: **Demonstrate knowledge of immunology**

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: Comply with medical law and ethics

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: Exhibit ethical behavior

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: Describe legal ramifications of misconduct

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: Practice discretion regarding patient information

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: Practice personal professional protocol with medical community

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: **Analyze factors that influence a patient's response to stress**

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: **Analyze physiological response to stress**

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: **Analyze psychological response to stress**

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: **Provide care for a patient with an ineffective coping response**

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: **Explain human growth and development**

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: **Demonstrate appropriate communication techniques**

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: Establish rapport

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: **Use emergency procedures**

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: **Perform first aid**

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: **Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards**

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: Respond to medical emergencies

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: Maintain medical records and laboratory reports

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: Prepare office communications

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: **Use office equipment**

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: **Demonstrate knowledge of different payment systems**

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: Perform diagnostic coding

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: Process insurance claims/forms

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: Perform financial functions

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Vital Signs

Competency: Interview patient

Competency Builders:

Complete patient information sheets
Record medical history (e.g., allergies, current medications)
Assess bio-psycho-social condition
Validate data with patient or patient's family member(s)

Competency: Measure temperature

Competency Builders:

Follow safety and aseptic precautions for taking temperature
Identify normal range and average temperature of oral, axillary, tympanic, and rectal methods of measuring body temperature
Identify factors that may affect temperature
Select route for measuring temperature
Demonstrate use of different types of thermometers
Record temperature measurements
Report abnormal temperature measurements
Maintain thermometer(s)

Competency: Measure pulse

Competency Builders:

Identify criteria for selecting pulse site (e.g., femoral, apical, radial)
Identify normal pulse range for different age groups
Identify factors that may affect pulse
Identify variations from normal pulse that should be reported
Record pulse

Competency: Measure respiration

Competency Builders:

Assess lung sounds
Measure rate, depth, and rhythm of respiration
Identify normal respiratory rate for different age groups
Report signs of compromised respiration
Identify factors that may affect respiration
Record respiration

Competency: Measure blood pressure

Competency Builders:

Identify myths and misconceptions related to blood pressure and hypertension
Identify etiology of hypertension
Identify consequences of untreated hypertension
Identify normal range of blood pressure for different age groups
Record blood pressure
Identify factors that affect blood pressure
Select appropriate cuff size
Describe the effect of inappropriate cuff size on accurate blood pressure reading
Identify variations from normal blood pressure that should be reported
Demonstrate use of aneroid sphygmomanometer gmomanometer
Demonstrate use of mercurial sphygmomanometer gmomanometer
Demonstrate palpated blood pressure

Competency: Obtain physical measurements

Competency Builders:

Measure adult height
Measure adult weight
Measure adult chest and waist expansion
Measure infant height
Measure infant weight
Measure infant head and chest circumference
Measure auditory status (e.g., tympanogram)
Measure visual status (e.g., eye chart)
Identify color blindness
Record all results

Unit: Nutrition

Competency: Identify fundamentals of nutrition

Competency Builders:

Identify nutrients and food groups
Explain role of nutrients to body functions
Explain regional, cultural, and religious food patterns
List factors which must be considered when purchasing food
Identify component of a balanced diet across the life span (e.g., USDA Food pyramid)
List factors which must be considered when storing food
Identify methods of food preparation
Instruct patient in sound nutrition principles

Competency: Identify nutritional needs related to special conditions and/or diseases

Competency Builders:

Describe common diets related to health alterations (e.g., pureed, mechanical-soft)
Describe special diets
Identify community resources
Identify risks of non-compliance with dietary restrictions
Educate patient regarding dietary hazards (e.g., caffeine, fats)

Competency: Draw correlation between diet and exercise

Competency Builders:

Identify methods of exercise
Explain effect of exercise and food on energy level
Write an exercise plan
Identify weight-related issues

Competency: Identify facets of alternative nutrition

Competency Builders:

Identify indications and effects of tube feedings
Identify indications and effects of intravenous fluids
Identify indications and effects of lipids
Identify indications and effects of hyperal

Unit: Basic Pharmacology

Competency: Maintain supply of medications

Competency Builders:

Check inventory stock
Contact supplier
Rotate stock
Process narcotic forms (i.e., Drug Enforcement Agency (DEA) license)
Store medications properly
Prepare expired medications for disposal
Dispose of medications properly (i.e., comply with government regulations)

Competency: Calculate dosage according to physician's orders

Competency Builders:

Verify accuracy of medical orders
Use Physician's Desk Reference (PDR)
Transcribe medication order
Calculate oral dosage
Calculate parenteral dosage
Calculate sublingual dosage
Calculate pediatric dosage
Calculate intravenous dosage and rate of flow

Competency: Instruct patients on use of medications

Competency Builders:

Provide verbal and/or written instructions for medication use
Explain use of medications (e.g., identify side effects, adverse effects, interactions)
Maintain standing orders according to physician's protocol (e.g., prescription refills)

Competency: Dispense medications according to medical orders

Competency Builders:

Identify patient
Verify patient allergies
Use reference materials
Verify accuracy of medical orders
Calculate dosages
Prepare oral medication
Identify correct anatomical sites
Prepare intramuscular, intradermal, and subcutaneous injectable medications
Prepare and administer sublingual medications
Prepare transdermal medications
Prepare inhalant medications
Prepare instillation medications
Prepare and administer topical medications
Prepare and administer rectal medications
Prepare and administer vaginal medications
Assist with administration of local anesthesia
Administer medications
Document medication administration
Document patient response to medications

Competency: Evaluate response to medication

Competency Builders:

Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medication

Unit: Patient Education

Competency: **Inform patient/family about diagnostic procedures**

Competency Builders:

Distribute literature regarding advised procedure
Explain diagnostic procedures
Explain preparation for diagnostic procedures
Translate medical terminology into lay terms
Distribute resource materials related to test results
Schedule patient follow-up
Obtain informed consent signature

Competency: **Educate patient/responsible party about self-care related to results of diagnostic procedure/therapy**

Competency Builders:

Identify support groups and resources
Obtain verbal and written information to plan patient's care
Reinforce special diets with patient/responsible party
Reinforce recommended exercise programs with patient/responsible party
Reinforce specialized applications (e.g., ortho, dietary, ostomy, splints, orthotics) with patient/responsible party
Reinforce self-administration of medications with patient/responsible party
Reinforce health maintenance techniques with patient/responsible party
Refer patient/responsible party to support groups and resources
Solicit patient/responsible party feedback
Record teaching and patient response
Instruct patient/responsible party in necessary adaptations to environment
Instruct patient/responsible party in adaptive techniques (e.g., activities of daily living, homemaking)

Competency: Provide psycho-social care for patient/family

Competency Builders:

Arrange emotional support for patient and family member(s)
Report child abuse and/or neglect
Respond to emotional needs of terminally ill patient and family member(s)
Apply reality orientation technique
Arrange diversional activity for patient

Competency: Inform patient about World Health Organization (WHO) immunization requirements

Competency Builders:

Instruct patient/family on infant, preschool, adolescent, and adult immunizations
Instruct patient/family on international requirements
Reinforce instructions from other health professionals to patient/family member(s)

Unit: Examinations

Competency: **Demonstrate general knowledge of diagnostic studies**

Competency Builders:

Describe the various methods of examining patients
Explain the functions of commonly used examining instruments
Describe the sequence of steps in a general physical examination
Identify various patient positions used in examinations
Identify common diagnostic blood tests performed in the medical laboratory
Differentiate between cultures and smears used in bacteriology
Identify sources from which cultures and smears may be obtained
Describe common radiological and sonographic studies and imaging techniques
Identify the purposes of nuclear medicine
Identify common cardiopulmonary diagnostic examinations
Identify common neurological diagnostic examinations

Competency: **Demonstrate principles of body mechanics and ergonomics**

Competency Builders:

Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient
Assist patient in and out of wheelchair
Assist patient with crutches
Assist patient with cane
Assist patient with walker
Assist patient with standing
Assist patient with cast or splints
Assist patient to bathroom
Position patient using supportive devices (e.g., pillows, footboards)
Perform ROM (i.e., range of motion)

Competency: Assist with general examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Change paper on examination table
Provide for patient privacy
Prepare patient for examination
Communicate with patient with special needs (e.g., hearing or vision disorder)
Inventory personal property
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Competency: Assist with eye, ear, nose, and throat examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with and chart eye irrigation
Assist with and chart ear irrigation
Assist with and chart tympanometry
Assist with and chart laryngoscopy
Describe taste bud reactions
Conduct visual screening
Conduct auditory screening
Administer eye, ear, and nose medications
Clean examination room after procedure

Competency: Assist with obstetric and gynecological examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Obtain cytology history
Assist with Pap smear
Instruct patient in self breast examination
Clean examination room after procedure

Competency: Assist with pediatric examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Record measurements on growth chart
Record immunizations
Apply restraints when needed (e.g., papoose board)
Clean examination room after procedure

Competency: Assist with proctology and gastrology examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with proctoscopy
Clean examination room after procedure

Competency: Assist with orthopedic examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment (e.g., soaks)
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with casting and splinting procedures
Demonstrate use of ambulatory aids
Assist patient in wheelchair transfer to and from examination table
Clean examination room after procedure

Competency: Assist with neurological examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Competency: Assist with geriatric examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Unit: Laboratory Tests and Diagnostic Procedures

Competency: Perform drug screen testing

Competency Builders:

Demonstrate safe use of equipment
Record results accurately
Collect and label specimen accurately

Competency: Perform tuberculosis testing

Competency Builders:

Administer tine test
Administer Mantoux test
Interpret test results

Competency: Perform specimen collection and handling

Competency Builders:

Collect eye, nose, and throat specimens for culture
Collect urine (e.g., clean-catch, sterile, 24-hour, midstream, catheter)
Collect stool specimen
Demonstrate proper techniques to perform venipuncture and capillary puncture
Collect wound specimens
Collect sputum specimens
Collect capillary blood
Collect venous blood using syringe
Collect venous blood using vacutainer
Label all collected specimens properly
Package specimen for mailing/shipping
Transport specimen
Differentiate among timed specimens, fasting specimens, and state specimens
Describe general criteria for suitability of a specimen for analysis
Describe conditions that must be met if specimens and tests are to be used as legal evidence

Competency: Assist with allergy testing

Competency Builders:

Prepare tray
Perform scratch test (e.g., ID test)
Perform patch test
Perform intradermal test

Competency: Perform manual and automated tests of complete blood count

Competency Builders:

Perform hematocrit (Hct)
Perform hemoglobin determination (hgB)
Perform red blood cell counts (RBC)
Perform white blood cell counts (WBC)
Perform white blood cell differential (diff)
Perform erythrocyte sedimentation rate (ESR)
Perform prothrombin time (PT)

Competency: Perform serological tests

Competency Builders:

Prepare serum
Perform serum blood chemistries
Separate plasma or serum from cells
Perform ABO and Rh typing
Perform monospot test
Perform serum pregnancy test (HCG)
Package record data and set-up delivery of blood samples

Competency: **Perform electrocardiograms**

Competency Builders:

Mount a 12-lead electrocardiogram
Run and record a standard
Set-up Holtor monitors
Clean electrocardiogram equipment

Competency: **Perform diagnostic skills**

Competency Builders:

Perform neurological checks
Perform urinary tests (e.g., sugar and acetone, protein, ketones, specific gravity)
Assist with laboratory tests (e.g., blood gases, lumbar puncture)
Measure blood glucose level
Maintain monitoring equipment (e.g., cardiac monitor, pulse oximeter)
Measure central venous pressure (CVP)
Perform electrocardiogram (ECG)
Perform visual screening
Perform auditory screening

Competency: **Demonstrate laboratory procedures in clinical chemistry**

Competency Builders:

List requirements for patient preparation
Describe special collection techniques (e.g., 24 hr. urine G)
Handle specimen properly
Correlate test procedure to methodology
Identify normal versus panic values
Identify clinical significant

Competency: **Demonstrate laboratory procedures in hematology/coagulation**

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal versus panic values
Identify clinical significance of test value

Competency: **Demonstrate laboratory procedures in immunohematology**

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal versus panic values
Identify clinical significance of test value

Competency: **Demonstrate laboratory procedures in microbiology**

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal verses panic values
Identify clinical significance of test value

Competency: Demonstrate laboratory procedures in immunology

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal verses panic values
Identify clinical significance of test value

Competency: Demonstrate laboratory procedures in urinalysis

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal verses panic values
Identify clinical significance of test value

Competency: Demonstrate safe phlebotomy techniques

Competency Builders:

Assemble equipment (e.g., vacutainers, bottles)
Differentiate venous versus arterial collection procedures (e.g., Allen test)
Prepare patient for procedure (e.g., establish rapport)
Care for phlebotomy site
Collect capillary blood
Collect venous blood with syringe
Collect venous blood with vacutainer
Collect blood culture
Handle specimen(s) properly

Competency: Administer laboratory management skills

Competency Builders:

Describe different management styles
Explain personnel evaluation process
Apply accounting principles
Analyze statistical data
Schedule personnel equitably
Negotiate contracts
Identify regulatory agencies (e.g., OSHA, CAP, JCAHO, AABB)
Explain Clinical Laboratory Improvement Amendment

Unit: The Nursing Process

Competency: Perform patient physical assessment

Competency Builders:

Demonstrate techniques used in physical assessment (e.g., inspect, auscultate, percuss, palpate)
Evaluate patient's level of comfort, discomfort and pain
Complete assessment of neurological system
Complete assessment of integumentary system
Complete assessment of lymphatic system
Complete assessment of head and neck
Complete assessment of respiratory system
Complete assessment of cardiovascular system
Complete assessment of gastrointestinal system
Complete assessment of musculoskeletal system
Complete assessment of reproductive system
Complete assessment of urinary system
Complete assessment forms

Competency: Collect additional patient data

Competency Builders:

Observe psychological signs and symptoms
Gather relevant data from patient, responsible party, health records and health care team members
Observe interaction of patient and/or responsible party
Observe patient response to care
Document additional assessment findings

Competency: Formulate nursing diagnoses

Competency Builders:

Identify actual or potential health care needs on the basis of analysis and interpretation of assessment data
Identify difference between medical and nursing diagnosis

Competency: Formulate patient plan of care

Competency Builders:

Participate with the patient, responsible party, and health care team to identify patient-centered goals and objectives
Incorporate patient's cultural and spiritual beliefs into plan of care
Incorporate patient's physiological, psycho social, and developmental needs and strengths into plan of care
Develop teaching plan
Develop discharge plan
Utilize available resources
Identify priorities for care
Write plan of care

Competency: Implement patient-centered care

Competency Builders:

Implement plan of care according to priority of needs
Adjust priorities as patient needs change
Demonstrate competency in nursing skills
Promote rehabilitation potential of patient
Promote psychological well-being of the patient
Provide for continuity of care
Make referrals on the basis of patient need and available resources (e.g., community, responsible party)
Respond to adverse reactions
Demonstrate principles of time management in organizing patient care

Competency: Provide care for older adult patients

Competency Builders:

Assess cognitive level of the older adult
Adapt nursing care of the older adult patient
Adapt safety principles as related to the older adult
Promote attitudes and living habits which encourage positive mental and physical health of the older adult
Provide nursing care for older adult patients with common alterations in behavior
Apply appropriate reality orientation techniques
Involve patients in meaningful diversional activities
Access community resources and services available to the older adult

Competency: Provide care for maternal/newborn patients

Competency Builders:

Provide instruction to patients regarding stages of pregnancy, complications, fetal development and methods of contraception
Provide instruction for the patient in the prenatal stage
Provide instruction for the patient during labor and delivery
Provide instruction for the post-partum patient
Provide instruction for care of the newborn

Competency: **Provide care for medical/surgical patients**

Competency Builders:

Identify signs and symptoms of disease/disorders across the life span
Explain signs and symptoms of disease/disorders to the patient
Care for the patient with diseases/disorders of all body systems
Care for the patient with common psychological and/or psycho-social disorders
Provide instruction for the patient, responsible party regarding psychological and/or psycho-social disorders
Provide pre- and post-operative care and instruction for the patient and/or responsible party

Competency: **Provide care for pediatric patients (including adolescents)**

Competency Builders:

Assess developmental age of the pediatric patient
Adapt nursing care for the pediatric patient
Apply safety principles for the pediatric patient
Describe general characteristics, and particular needs/problems of pediatric patients
Implement prescribed nutritional requirement
Provide appropriate diversion and recreational activities
Describe the common disease/disorders of children and relate them to the pediatric patient
Provide instruction for the pediatric patient and/or responsible party regarding particular needs and problems

Competency: **Provide care for the rehabilitation patient**

Competency Builders:

Assist the patient, responsible party with specified physical, cognitive, and/or emotional rehabilitation needs
Function as a member of a multidisciplinary team
Encourage patient to achieve maximal functional level

Competency: **Evaluate patient care**

Competency Builders:

Describe effect of nursing interventions
Verify patient and/or responsible party compliance with planned care
Identify which outcomes have been met

Competency: **Revise plan of care**

Competency Builders:

Reassess patient needs
Utilize input from patient, responsible party, and health care team members
Modify goals to meet patient needs

Unit: Nursing Communication

Competency: Demonstrate effective patient interviewing techniques

Competency Builders:

List types of questions for obtaining information in a patient interview
Describe factors that facilitate or hinder a patient interview
Apply principles of therapeutic communication

Competency: Report assessment of patient and nursing actions

Competency Builders:

Explain the legal basis of specific charting guidelines
Identify measures employed to ensure documentation meets agency and legal standards
Document the assessment of patient and nursing actions in writing

Competency: Implement a teaching plan for an identified patient learning need

Competency Builders:

Differentiate teaching from learning
Identify the role of the nurse in health teaching
Explain ways to reinforce new knowledge
Describe factors which influence a patient's readiness to learn
Identify one or more learning needs of a patient
Identify guidelines for evaluating the effectiveness of the health teaching plan
Write a health teaching plan

Competency: **Demonstrate use of research strategies**

Competency Builders:

Identify resources relevant to patient care
Identify news relating to research in health care
Identify methods used to research
Use the problem solving approach in nursing practice
Identify research problems that need to be studied

Competency: **Apply management skills for patient care**

Competency Builders:

Identify the characteristics of an effective leader
Explain the significance of an organizational chart to communication units
Describe different approaches to management of nursing care (e.g., primary care, team nursing)
Contrast the advantages and disadvantages of each system of nursing care

Competency: **Demonstrate knowledge of the evaluation process necessary for effective management of nursing care**

Competency Builders:

Construct an evaluation of nursing performance in measurable terms
Explain how the nursing audit contributes to quality assurance
Differentiate between retrospective and concurrent audit
Explain how medical and nursing audits are used by the Joint Commission on Accreditation of Hospitals (JCAH)

Competency: Demonstrate management of multi-patient care

Competency Builders:

Assess the nursing needs of patients and the member of staff necessary to care for these patients, based on an analysis of acuity
Set goals and priorities based on individual patient care needs
Provide assistance and guidance to other members of the health care team
Adapt nursing activities based on demands of the health care team
Provide coordinated and continuous patient care
Participate in multi-disciplinary team conferences
Interpret scope and function of task to assignment(s)
Assess knowledge level of staff and patients
Plan measures to assist patients and staff members to achieve goals
Transcribe physician orders correctly in a timely manner
Give concise and pertinent report to the on-coming shift
Complete interdepartmental requisitions
Disseminate reports to appropriate units
Write discharge planning criteria for the patient
Evaluate the impact of nursing interventions
Participate in quality assurance procedures within a health care institution

Competency: Evaluate trends and issues in health care profession

Competency Builders:

Describe trends that are evident in promoting transcultural nursing
Illustrate how a nurse can participate in promoting cultural sensitivity in nursing practice
Analyze the diversity of practice roles
Describe the pros and cons of the nurse's expanding role
Analyze the purpose and functions of the American Nurses Association, National League for Nursing, State Board of Nurse Examiners and other regulatory agencies (e.g., JCAHO, Medicaid/Medicare)

Competency: **Explain the scope and standards of nursing practice with patients experiencing complex needs**

Competency Builders:

Define evolution of nursing profession
Outline various nursing theories
Outline components of Nurse Practice Act
Interpret laws pertinent to nursing
Examine the legislative process' impact on nursing practice
Develop plans of care
Adapt health assessment techniques to the needs of patients with complex illnesses
Identify teaching/learning needs (e.g., pharmacology, nutrition) of patients and families
Differentiate between acute and chronic illness in terms of physiological and physchological adaptation
Describe therapeutic regimes for acute and chronic illness

Competency: **Implement a developed plan of patient care using the nursing process**

Competency Builders:

Collect objective and subjective data
Examine data
Validate data
Identify strengths and problems
Write a diagnostic statement for nursing diagnosis using the current North American Nursing Diagnosis Association list
Use the Problem Etiology and Signs and Symptoms (PES) format to validate the nursing diagnosis
Prioritize nursing diagnosis using multiple theories of need and patient's perception of priorities
Set timely goals for care
Define nursing interventions
Perform nursing interventions
Evaluate patient's goal achievement
Modify plan or terminate care

Competency: **Assess the physical and emotional needs of patients and their families with complex disorder conditions**

Competency Builders:

Describe the symptoms, course of disease, and common treatment of complex disorders/conditions
Identify the profound psychological problems that may arise in connection with complex disorders/conditions
Apply the nursing process for patients experiencing complex disorder conditions
Assist with therapeutic measures indicated

Competency: **Use therapeutic rationale for nursing procedures**

Competency Builders:

Identify procedure needed
Read procedure manual
Gather equipment
Explain procedure and expected outcome to patient
Explain possible adverse reactions/complications
Perform nursing procedures
Document procedure and patient response

Competency: **Assist in care of patients suffering psychological and/or emotional trauma**

Competency Builders:

Identify signs and symptoms of various psychological disorders
Identify signs and symptoms of various emotional disorders
Perform interventions specific to disorder
Document intervention and response

Unit: Nursing Clinical Procedures

Competency: Use therapeutic rationale for nursing procedures

Competency Builders:

Identify procedure needed
Read procedure manual
Gather equipment
Explain procedure and expected outcome to patient/resident/client
Explain possible adverse reactions/complications
Perform nursing procedures
Document procedure and patient response

Competency: Perform activities of daily living skills

Competency Builders:

Provide for patient privacy when indicated
Assist patient with elimination
Change clothing
Give patient bath (i.e., assisted; complete)
Perform hygienic care for skin, hair, mouth, perineum, feet, nails
Apply athrombic hose
Administer backrub
Make different types of beds
Feed patient
Measure intake and output
Record intake and output
Prevent pressure areas
Provide care for relaxation and sleep
Demonstrate patient transfer and transport techniques
Demonstrate basic care of hearing aid
Assist with modifying patient food and fluid intake
Perform range of motion (ROM) exercises

Competency: Perform equipment skills

Competency Builders:

Operate special beds
Sterilize equipment/supplies
Set-up vaporizer
Demonstrate use of hydraulic lift
Demonstrate use of air mattress
Demonstrate use of bed scales
Demonstrate use of medicine cart
Demonstrate use of water mattress
Demonstrate use of footboard
Demonstrate use of overbed cradle
Apply aquamatic pad
Initiate oxygen therapy
Demonstrate use of emergency cart
Explain basic application of non-life support equipment (e.g., pulse oximeter, portable cardiac monitor, PCA pump, fetal monitor, Holter monitor)
Explain basic application of life support equipment (components, ancillary equipment and assembly)
Explain use of spirometer
Demonstrate use of basic therapeutic equipment (e.g., IV pump, tube feeding pump)
Apply hypothermia blanket

Competency: Perform non-invasive procedures

Competency Builders:

Demonstrate proper methods of positioning and draping a patient
Identify steps to admit patient
Complete patient assessment
Inventory patient possessions
Utilize hot/cold therapies
Demonstrate patient restraint methods
Prepare patient for surgery
Receive patient for surgery
Administer post-operative care
Change ostomy appliance
Instruct in coughing and deep breathing exercises
Identify steps to transfer patient to another unit/facility
Remove sutures and staples
Provide postmortem care
Identify steps to discharge patient
Complete discharge summary
Perform cast care
Assist with sitz bath
Empty drainage systems (e.g., urinary, biliary, gastrointestinal, tissue tubes)
Create a sterile field
Apply pressure dressings
Provide skeletal traction care
Maintain internal feedings (e.g., nasogastric, gastrostomy)
Maintain chest tube
Provide care of surgical drains
Maintain central venous lines
Maintain intravenous (IV) infusions

Competency: Perform invasive procedures

Competency Builders:

Administer enemas
Insert rectal tubes
Irrigate ostomy
Change dressings
Perform vaginal irrigation
Perform oro/nasopharyngeal suctioning
Perform tracheal suctioning
Irrigate wounds
Insert urinary catheter
Perform intermittent and continuous bladder irrigation's
Perform gastric lavage
Maintain nasogastric tube
Discontinue nasogastric tube
Perform tracheostomy care
Perform decuitus care
Perform eye irrigation
Perform ear irrigation
Maintain airways
Initiate intravenous (IV) infusions

Competency: Assist with surgical procedures

Competency Builders:

Complete surgical scrub
Don sterile gloves, mask/faceshield, and gown
Prepare examination room(s)
Identify instruments for correct tray setup
Set-up trays and equipment
Prepare patient for examination
Assist with examination
Carry out physician's orders
Prepare skin and drape patient for minor surgery
Assist with insertion and removal of sutures and staples
Remove contaminated dressing
Apply sterile dressing
Check procedure documentation
Clean examination room after procedure
Follow-up patient needs

Competency: Assist with therapeutic measures

Competency Builders:

Give enema
Insert rectal tube
Irrigate colostomy
Apply cold compress
Administer hot soak
Apply heat lamp
Apply warm compress
Apply aquamatic pad
Apply ice bag
Assist with dressing change
Apply clean dressing
Apply elastic bandage
Apply binder
Given vaginal douche
Apply topical ointment
Insert suppository
Apply antiembolism elastic stockings

Unit: Advanced Nursing Concepts

Competency: **Demonstrate knowledge of the physical and emotional needs of patients and their families with complex disorders of the cardiovascular system**

Competency Builders:

State the psychophysiologic principles for assessing and treating persons with complex disorders of the cardiovascular system (e.g., myocardial, infarction, shock, CV surgery, pacemakers, pericarditis, hypertensive crises)
Identify populations at risk for developing these disorders
Identify drugs commonly used in treating complex cardiovascular disorders and their side effects
Apply nursing process to patients experiencing complex disorders of the cardiovascular system
Develop a teaching plan to aid the patient/family in understanding the pathology, diagnostic tests and change of lifestyle associated with complex disorders of the cardiovascular system
Identify the psychosocial implications of complex cardiovascular dysfunction
Explain the underlying physiological principles of hemodynamic monitoring techniques used in the care of the critically ill cardiovascular patient
Contrast clinical signs associated with different types and degrees of shock
Formulate appropriate pre-and post-operative nursing care for patients having cardiac or cardiovascular surgery
Describe the therapeutic implications for temporary and permanent cardiac pacing (including nursing management), emphasizing the prevention of potential complications

Competency: **Demonstrate knowledge of the physical and emotional needs of patients and their families with complex disorders of the renal system**

Competency Builders:

Identify patients at risk for developing metabolic, fluid, and electrolyte imbalances
Identify clinical signs/symptoms and underlying pathophysiology of complex disorders of the renal system
Correlate clinical assessment data and laboratory findings into specific acid/base and fluid/electrolyte disturbances
Describe a detailed plan of care from both preventive and acute care perspectives
Explain interventions for the acute, chronic and education needs of patients/families with complex disorders of the renal system
Describe common medications used for complex disorders of the renal system and nursing implications of each
Contrast clinical indications, modes of action, potential complications, and nursing management of patients undergoing peritoneal dialysis and hemodyalisis

Competency: **Demonstrate knowledge of the physical and emotional needs of patients and their families with complex disorders of the endocrine system**

Competency Builders:

Identify diagnostic procedures used in the assessment of complex disorders of the endocrine system
Evaluate the influence of complex endocrine disorders on other body systems
Formulate nursing process for high acuity patients experiencing complete endocrine disorders
Contrast the pathophysiologic effects of hormone hypersecretion and hyposecretion
Describe nursing implications for laboratory and diagnostic procedures used to evaluate complex endocrine disorders
Describe the psychological implications of changes in body image and lifestyle necessitated by complex endocrine disorders

Competency: **Demonstrate knowledge of the physical and emotional needs of patients and their families with complex disorders of the neurological system**

Competency Builders:

Describe the pathophysiological basis for signs and systems noted in complex disorders of the neurological system
Identify the profound physical, psychological, social and sexual adjustments faced by persons who experience these disorders
Apply nursing process to patients/families with complex disorders of the neurological system, in both acute and rehabilitative settings
Utilize the neurologic examination with a patient in an altered state of consciousness
Evaluate fluid and electrolyte imbalances commonly seen in complex neurological dysfunction
Plan nursing care appropriate for neurological diagnostic tests and treatment modalities, including specialized pre-and post-operative needs
Describe the treatment modalities used in the management of complex neurological disorders including the care of the other body systems

Competency: **Demonstrate knowledge of the physical and emotional needs of patients and their families with multisystem disorders across the lifespan**

Competency Builders:

Utilize pertinent nursing assessments on patients in emergency and multisystem disorders across the lifespan
Prioritize the nursing management of patients experiencing emergency and multisystem disorders
Explain treatment modalities in emergency and multisystem disorders
Apply nursing process for patients/families experiencing physical and/or psychosocial stress in these situations
Evaluate nursing management of problems arising from the effects of multisystem and emergency disorders
Identify causes of multisystem and emergency disorders
Estimate the severity of burns
Evaluate the nursing role in prevention, acute management, or rehabilitative management of patients experiencing multisystem or emergency disorders

Unit: Medication Use

Competency: Maintain supply of medicatons

Competency Builders:

Check inventory stock
Contact supplier
Rotate stock
Store medications properly
Prepare expired medicatons for disposal
Dispose of medications properly (e.g., comply with government regulations)

Competency: Calculate dosage according to physician's orders

Competency Builders:

Verify accuracy of medical orders
Use appropriate references for fact-finding and comparisons
Transcribe medication order
Calculate dosage (e.g., oral, parenteral, sublingual, pediatric)
Calculate intravenous dosage and rate of flow

Competency: Identify methods of administering medications according to physician's orders

Competency Builders:

Identify patient
Verify patient allergies
Use reference materials
Verify accuracy of medical orders
Identify correct anatomical sites
Identify dosage forms (e.g., oral, injectable, sublingual, transdermal, inhalant, instillation, topical, rectal, vaginal, and injectable)

Competency: **Evaluate response to medication**

Competency Builders:

Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medicaton

Pharmacy Technologist

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	Page
Employability Skills	PHT-3
Professionalism	PHT-8
Teamwork	PHT-12
Computer Literacy	PHT-14
Documentation	PHT-15
Infection Control and Risk Management	PHT-16
Medical Terminology	PHT-23
Anatomy, Physiology, and Pathology	PHT-24
Medical Law and Ethics	PHT-31
Psychology of Stress	PHT-33
Psychology of Human Relations	PHT-35
First Aid and Medical Emergencies	PHT-38
General Administrative Duties	PHT-40
Nutrition	PHT-46
Patient Education	PHT-48
Medication Use	PHT-50
Pharmacy Technology	PHT-52

DON'T FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: Develop a career plan

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: Prepare for employment

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: Evaluate the importance of self-esteem as an employability skill

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: Project professional image

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: Achieve individual and professional goals

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: Manage personal finances

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: Manage stressful situations

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: Analyze effects of family on work and work on family

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: Apply lifelong learning skills

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: Manage professional development

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: Use teamwork to solve problems

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: Conduct team meetings

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: Demonstrate proficiency in technical documentation

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: Demonstrate proficiency in technical report writing

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: **Comply with local, state, and federal regulations**

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: Maintain personal safety and hygiene

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: **Demonstrate general knowledge of basic chemistry**

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: **Demonstrate general knowledge of the human body**

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: Demonstrate knowledge of the integumentary system

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: Demonstrate knowledge of the skeletal system

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: **Demonstrate knowledge of the circulatory/cardiovascular system**

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: **Demonstrate knowledge of the lymphatic system**

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: Demonstrate knowledge of the urinary system

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: Demonstrate knowledge of the reproductive system

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: Demonstrate knowledge of the senses

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: **Demonstrate knowledge of immunology**

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: Comply with medical law and ethics

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: Exhibit ethical behavior

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: Describe legal ramifications of misconduct

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: Practice discretion regarding patient information

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: Practice personal professional protocol with medical community

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: **Analyze factors that influence a patient's response to stress**

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: **Analyze physiological response to stress**

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: Analyze psychological response to stress

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: Provide care for a patient with an ineffective coping response

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: **Explain human growth and development**

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: **Demonstrate appropriate communication techniques**

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: Establish rapport

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: Use emergency procedures

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: Perform first aid

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: Respond to medical emergencies

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: **Maintain medical records and laboratory reports**

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: **Prepare office communications**

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: Use office equipment

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: Demonstrate knowledge of different payment systems

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: Perform diagnostic coding

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: Process insurance claims/forms

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: Perform financial functions

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Nutrition

Competency: Identify fundamentals of nutrition

Competency Builders:

Identify nutrients and food groups
Explain role of nutrients to body functions
Explain regional, cultural, and religious food patterns
List factors which must be considered when purchasing food
Identify component of a balanced diet across the life span (e.g., USDA Food pyramid)
List factors which must be considered when storing food
Identify methods of food preparation
Instruct patient in sound nutrition principles

Competency: Identify nutritional needs related to special conditions and/or diseases

Competency Builders:

Describe common diets related to health alterations (e.g., pureed, mechanical-soft)
Describe special diets
Identify community resources
Identify risks of non-compliance with dietary restrictions
Educate patient regarding dietary hazards (e.g., caffeine, fats)

Competency: Draw correlation between diet and exercise

Competency Builders:

Identify methods of exercise
Explain effect of exercise and food on energy level
Write an exercise plan
Identify weight-related issues

Competency: Identify facets of alternative nutrition

Competency Builders:

Identify indications and effects of tube feedings
Identify indications and effects of intravenous fluids
Identify indications and effects of lipids
Identify indications and effects of hyperal

Unit: Patient Education

Competency: **Inform patient/family about diagnostic procedures**

Competency Builders:

Distribute literature regarding advised procedure
Explain diagnostic procedures
Explain preparation for diagnostic procedures
Translate medical terminology into lay terms
Distribute resource materials related to test results
Schedule patient follow-up
Obtain informed consent signature

Competency: **Educate patient/responsible party about self-care related to results of diagnostic procedure/therapy**

Competency Builders:

Identify support groups and resources
Obtain verbal and written information to plan patient's care
Reinforce special diets with patient/responsible party
Reinforce recommended exercise programs with patient/responsible party
Reinforce specialized applications (e.g., ortho, dietary, ostomy, splints, orthotics) with patient/responsible party
Reinforce self-administration of medications with patient/responsible party
Reinforce health maintenance techniques with patient/responsible party
Refer patient/responsible party to support groups and resources
Solicit patient/responsible party feedback
Record teaching and patient response
Instruct patient/responsible party in necessary adaptations to environment
Instruct patient/responsible party in adaptive techniques (e.g., activities of daily living, homemaking)

Competency: Provide psycho-social care for patient/family

Competency Builders:

Arrange emotional support for patient and family member(s)
Report child abuse and/or neglect
Respond to emotional needs of terminally ill patient and family member(s)
Apply reality orientation technique
Arrange diversional activity for patient

Competency: Inform patient about World Health Organization (WHO) immunization requirements

Competency Builders:

Instruct patient/family on infant, preschool, adolescent, and adult immunizations
Instruct patient/family on international requirements
Reinforce instructions from other health professionals to patient/family member(s)

Unit: Medication Use

Competency: **Maintain supply of medicatons**

Competency Builders:

Check inventory stock
Contact supplier
Rotate stock
Store medications properly
Prepare expired medicatons for disposal
Dispose of medications properly (e.g., comply with government regulations)

Competency: **Calculate dosage according to physician's orders**

Competency Builders:

Verify accuracy of medical orders
Use appropriate references for fact-finding and comparisons
Transcribe medication order
Calculate dosage (e.g., oral, parenteral, sublingual, pediatric)
Calculate intravenous dosage and rate of flow

Competency: **Identify methods of administering medications according to physician's orders**

Competency Builders:

Identify patient
Verify patient allergies
Use reference materials
Verify accuracy of medical orders
Identify correct anatomical sites
Identify dosage forms (e.g., oral, injectable, sublingual, transdermal, inhalant, instillation, topical, rectal, vaginal, and injectable)

Competency: **Evaluate response to medication**

Competency Builders:

Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medicaton

Unit: Pharmacy Technology

Competency: **Comply with appropriate regulations**

Competency Builders:

List names and primary functions of two federal agencies involved with pharmacy and drug regulations and enforcement
Describe primary roles and functions of State Board of Pharmacy
Explain state and federal legal regulations that govern compounding and dispensing of drugs in pharmacy
Summarize the American Pharmaceutical Association Code of Ethics
Identify a situation in which it may be appropriate for a pharmacist to intervene in a patient's treatment
Explain concept of "right" to health care
Differentiate between pharmacist and technician responsibilities in pharmacy practice

Competency: **Explain laws and administrative rules as they relate to pharmacy technicians**

Competency Builders:

State definition and roles of supportive personnel in pharmacy as given by State Board of Pharmacy
Identify current Board of Pharmacy criteria for education and training of pharmacy technicians
Define role of a pharmacy technician as given by national pharmacy associations
Explain various actions and planning at national level regarding education and training of pharmacy technicians
Identify American Society of Hospital Pharmacists' (ASHP) role in accreditation of pharmacy technician training programs
Contrast education and training required for licensed pharmacists and pharmacy technicians
Recite procedure for filling a prescription with respect to what a technician can do and what a pharmacist must do
Differentiate between when a technician can take a phone call verses when a pharmacist must take a phone call
Explain how a pharmacy technician can be charged with practicing pharmacy without a license
Explain "pharmacist to technician ratio"

Competency: Explain pharmacy safety

Competency Builders:

Explain the Right to Know Act in respect to hazardous materials
Explain the purposes of OSHA in respect to pharmacy technology
List environmental hazards in pharmacy
List potential hazards encountered in handling materials in pharmacy
Identify general safety measures to follow in event of a robbery
Explain the purpose of the Harrison Narcotic Act, Drug Enforcement Agency (DEA), and Uniform Controlled Substances Act
Explain the general purpose of the Poison Prevention Packaging Act
Identify "Mr. Yuk" symbol and its purpose
Identify special dangers of medications to children
Identify the five classes of controlled substances and examples of each
Explain how "exempt narcotics" differ from controlled substances
Identify examples of "exempt narcotics"

Competency: Complete prescription information

Competency Builders:

Define prescription
Identify the parts of a legal prescription
Identify terms used in writing prescriptions
Define "trade name" and "generic name"
Identify generic and trade names of commonly used drugs
Define terms related to classifications of drugs and prescriptions (e.g., legend drug, prescription drug, over-the-counter medication, controlled substance, narcotic, exempt narcotic, scheduled drug, investigational drug)
Differentiate "new" and "refill" prescriptions
List major symbols and abbreviations used on prescriptions and state meaning of each
Identify pharmaceutical terminology (e.g., frequency, relationship of time, routes of administration, weights and measures, dosage forms, direction or side of body, elements and electrolytes, intravenous solutions)
Identify items on an incomplete prescription that are required to complete prescription
Evaluate which items on an incomplete prescription form can be completed by a pharmacy technician and which must be completed by a pharmacist

Competency: Apply pharmaceutical calculations

Competency Builders:

Identify elements of metric system
Convert measurements within apothecary, avoirdupois, and metric systems
Use ratio, proportion, and percentage arithmetic procedures to solve pharmaceutical calculation problems
Calculate number of dosage units (e.g., tablets, pills, milliliters) to provide a specific dose of medication in milligrams
Calculate an IV drip rate that will deliver a specified amount of drug per unit of time

Competency: Identify routes of administration

Competency Builders:

Describe various routes of drug administration
List advantages and disadvantages of various routes of drug administration
Give examples of medications administered by each route of administration

Competency: Identify dosage forms

Competency Builders:

Differentiate between dosage forms that are designed for local administration and those for systemic administration
Identify dosage forms (e.g., irrigation, inhalant, parenteral solution, tablet, capsule, pill, solution, suspension, elixir, tincture, fluid extract, emulsion, lotion, liniment, ointment, suppository, powder, and injectable)

Competency: **Explain relationship of companion over-the-counter (OTC) products and supplies**

Competency Builders:

Explain role of self-medication with OTC products in health care delivery system
Explain how a patient would know when OTC medication is appropriate
Explain federal regulation of nonprescription drugs
Explain advertising and OTC products
Identify various non-medication products normally found in pharmacies which are essential to medical therapy of selected diseases (e.g., insulin, syringes, urine-testing agents)
Identify common OTC products available for a variety of selected medical conditions

Competency: **Process prescription according to pharmacy policy and regulations**

Competency Builders:

Explain laws regarding filling and dispensing of a drug in institutional and non- institutional pharmacy practice
Fill prescriptions for outpatients in accord with state, federal, and facility policy and regulations
Fill prescriptions for hospitalized or institutional patients in accord with state, federal, and facility policy and regulations
Fill orders for institutional patients using ward stock, floor stock, and unit dose procedures
Follow explicit written and verbal procedures for preparation of a prescription product
Adhere to state, federal, and facility policy, procedures, and regulations regarding pharmacy practice
Select appropriate drug and dosage formulation from stock area for preparing a specified prescription
Measure amount of medication to prepare prescription
Place medication in appropriate container for dispensing to patient, taking into account packaging requirements for product as well as those necessary for patient
Return stock container of medication to its appropriate storage area

Competency: Identify types and uses of containers

Competency Builders:

Identify names and common sizes of prescription containers for oral and topical medications dispensed to outpatients
Select containers for outpatient prescriptions based on product and quantity dispensed
Explain how to use child-resistant containers
Identify alternatives to child-resistant containers and when alternatives can be used
Identify most common sizes of intravenous fluid containers
Differentiate between small volume parenterals (SVPs) and large volume parenterals (LVPs)
Differentiate between multi-dose and unit-dose medications for oral solids, oral liquids, and parenteral products

Competency: Apply compounding and reconstitution skills

Competency Builders:

Identify pharmaceutical weights on a pharmaceutical balance
Use pharmaceutical weights on a pharmaceutical balance
Use common pharmaceutical weighing equipment
Use common pharmaceutical volume measurement equipment
Select appropriate utensils and containers for use in compounding a product
Measure quantities (e.g., weights, volumes, and number) of ingredients in a product to be compounded
Reconstitute a powder for oral solution or suspension
Reconstitute a powder for parenteral solution and administration
Make a liquid dilution from a concentrate
Follow a written procedure or recipe for mixing and preparing a product
Record ingredients and procedure used to compound a product on appropriate record of documentation
Clean equipment used in compounding and reconstitution procedures
Store equipment used in compounding and reconstitution procedures

Competency: Apply packaging skills

Competency Builders:

Select container most appropriate for specified prescriptions
Transfer prescriptions to containers in which they will be dispensed to patients
Repackage medication from bulk containers to smaller quantities
Record lot numbers and expiration dates and or inventory control data
Prepare outpatient prescription labels using appropriate style and content for specific medications in accord with state, federal, and facility policies and regulations
Select auxiliary labels for specified medications
Prepare labels for repackaged medications using accordance with state, federal, and facility policies and regulations
Prepare labels for multi- and unit-dose inpatient medications

Competency: Charge medicines

Competency Builders:

Calculate number of unit doses of medication to be charged to a patient for a specified time period
Apply number of unit doses of medication to be charged to a patient for a specified time period
Calculate correct charge for a compounded medication or IV-additive product given department's charging structure and formula for product
List criteria used to determine whether a product returned is eligible for credit
Apply credit to patient's account
Price prescriptions for institutional vs. non-institutional patients
Prepare receipts as needed
Credit returned medications for institutional patients

Competency: Practice aseptic technique

Competency Builders:

Reconstitute a drug product aseptically both inside and outside a laminar flow hood
Transfer reconstituted drugs aseptically from rubber-capped vials and glass ampules to containers of intravenous solutions
Use mass reconstitution techniques employing multiple additive sets and automated pipetting equipment
Demonstrate proper hand washing technique
Define contamination, pyrogen, sterile, and incompatibility relative to parenteral products
Use an IV filter commonly employed in pharmacy
Explain government regulations concerning compounding of chemotherapy
Describe risks associated with compounding chemotherapy products
Describe procedures for handling, compounding, dispensing, administering, and disposal of cytotoxic drugs and waste
Describe proper use of equipment in safe handling of cytotoxic drugs

Competency: Reconstitute drugs per specification

Competency Builders:

Interpret manufacturer instructions and specifications for reconstitution of specific drug products
Reconstitute specified parenteral products using aseptic technique
Mix specified parenteral products using aseptic technique
Identify dilutents commonly used to reconstitute sterile products
Differentiate between dilutents which can be employed for multi-use vs. single-use
Calculate weight/volume concentration of a drug which has been reconstituted
Calculate weight/volume concentration of a product which has been admixed to a parenteral or irrigation solution
Calculate volume of a parenteral solution that should be administered per unit of time in order to deliver a specified amount of medication given concentration of medication
Calculate amount of parenteral fluid that would be delivered per unit of time given a specific rate of delivery

Competency: Identify facets of alternative nutrition

Competency Builders:

Identify indicatons and effects of tube feedings
Identify indications and effects of intravenous fluids
Identify indications and effects of lipids
Identify indicatons and effects of Hyperab

Competency: Prepare daily intravenous solutions

Competency Builders:

Identify various sizes and types of IV caters, needles, administration sets, containers, syringes, pumps, and regulators
Prepare SVPs to be administered through syringes
Prepare S&LVPs in glass and plastic containers
Label products with their correct name, strength, expiration date, and any important information regarding their administration
Demonstrate proper technique for visual inspection of parenteral solutions

Competency: Work in vertical and horizontal laminar hoods

Competency Builders:

Differentiate between hood design and air-flow patterns in horizontal and vertical laminar hoods
Identify major components of a laminar-flow hood
List drugs which should be mixed in one type of hood versus the other type
Demonstrate ability to properly admix drugs in each type of hood
Clean counter-space in a hood
Replace filter in a hood

Competency: Maintain quality control records and methods

Competency Builders:

Complete data forms for documenting daily cleaning and inspection of laminar air-flow hood and for monthly changes of hood filter
Collect air-culture to evaluate proper functioning of hood
Collect random or routine culture of a parenteral solution
Complete data forms for documenting daily manufacturing and compounding in IV room
Explain inventory management methods of "last in-first out" (LIFO) and "first in-first out" (FIFO)
Identify products that are best managed by LIFO and FIFO
Describe how a "want book" is used
Operate unit-dose prepackaging equipment
Calculate number of doses for placement in a unit dose bin given time period covered by unit dose cabinet
Fill a set of unit dose bins from a patient profile, a computer-generated unit dose fill sheet, or a medication administration record
Explain institutional policies on automatic stop orders
Identify drugs for which automatic stop orders commonly apply

Competency: Maintain stock levels

Competency Builders:

Process purchase orders and invoices for drugs and supplies
Use inventory cards or inventory record-keeping systems
Make appropriate decisions regarding orders for stock based on amounts left in inventory
Identify "borrow and loan" policies, procedures, and regulations appropriate to facility
Unpack drug and supply orders
Check drug and supply orders for possible shipping damage
Process claims for shortages/overages and damaged shipments
Return merchandise for exchange or credit
Price received products
Rotate products in pharmacy storage areas
Check-in narcotic and or controlled drugs upon receipt in pharmacy
Store narcotic and/or controlled drugs upon receipt in pharmacy
Dispose of narcotic and controlled drugs according to expiration date
Check-in products that require special handling and/or refrigeration upon receipt in pharmacy
Store products that require special handling and/or refrigeration upon receipt in pharmacy
Define repackaging, prepackaging, and unit-dose packaging
Prepare unit-doses from drugs received in bulk containers
Follow policies and procedures for return of drugs and goods to suppliers

Competency: **Assist with disposition and recording of controlled substances**

Competency Builders:

Identify state and federal agencies directly involved with pharmacy that monitor use and distribution of controlled substances
Explain recordkeeping systems required for controlled substances in both outpatient and institutional pharmacy environment
Define "proof-of-use" documents involved with institutional pharmacy practice
Define requirements for information on prescription and labeling for dispensing a controlled substance
Define perpetual inventory narcotic drug audit controls as they relate to controlled substances
Complete appropriate forms for ordering, distribution, and maintenance of inventory of controlled substances in outpatient and institutional pharmacy practice
Fill a narcotic drug order using a narcotic inventory control system
Explain need for subsequent destruction of expired and returned narcotic drugs in presence of state drug inspector
Explain policy regarding storage and subsequent destruction of expired and returned narcotic drugs in presence of state drug inspector
Demonstrate the process of witnessing the disposal of excess or damaged doses of narcotic drugs by a second individual
Define double-signature

Competency: Maintain prescription data and records

Competency Builders:

Double-check accuracy and completeness of information contained on prescription
File completed prescriptions
Record information accurately
Maintain patient medication profile
Define medication administration record (MAR)
Explain use of MAR and its importance to pharmacy
Complete Exempt Narcotic and Poison Ledger
Complete appropriate billing forms for various third-party insurers (e.g., Medicaid, Pharmacy Card System, Insurance Fund)
Complete appropriate procedure for discharge or point-of-sale billing to a patient's family
Complete insurance affidavit for verification of prescription purchases
Explain purpose of reference sources (e.g., Pharmacy Law, Rules, and Regulations; USP D.I., Volumes I-III; Facts and Comparisons; Physician's Desk Reference; Remington's Practice of Pharmacy; Blue Book; an intravenous compatibility table or book)
Use reference sources

Competency: Practice accuracy

Competency Builders:

Define medication error
Identify common types of medication errors
Explain how medication errors most commonly occur
Differentiate among magnitude of a microgram, milligram, and gram in context of drug dosages
Differentiate among a milliliter, teaspoonful, and tablespoonful in context of drug dosages

Competency: Practice time management

Competency Builders:

Complete assigned work in time allotted for task
Use time productively
Prioritize multiple tasks when faced with a time shortage
Respond with flexibility when job demands require performance of functions which are not scheduled or are not part of the job description

Competency: Record medications

Competency Builders:

Log schedule of medicatons on patient's chart
Log schedule of drugs on medication log
Log validation date and volume
Log control/lot number and expiration date
Log injection factors (e.g., date, volume)
Obtain counter-signature of physician

Medical Laboratory Technician

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	Page
Employability Skills	MLT-3
Professionalism	MLT-8
Teamwork	MLT-12
Computer Literacy	MLT-14
Documentation	MLT-15
Infection Control and Risk Management	MLT-16
Medical Terminology	MLT-23
Anatomy, Physiology, and Pathology	MLT-24
Medical Law and Ethics	MLT-31
Psychology of Stress	MLT-33
Psychology of Human Relations	MLT-35
First Aid and Medical Emergencies	MLT-38
General Administrative Duties	MLT-40
Vital Signs	MLT-46
Nutrition	MLT-49
Basic Pharmacology	MLT-51
Patient Education	MLT-53
Laboratory Tests and Diagnostic Procedures	MLT-55
Clinical Chemistry	MLT-61
Immunohematology	MLT-69
Immmunology and Serology	MLT-74
Bacteriology	MLT-77
Parasitology	MLT-82
Urinanalysis	MLT-84
Hematology	MLT-87
Phlebotomy	MLT-92

DON'T FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: **Develop a career plan**

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: Prepare for employment

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: Evaluate the importance of self-esteem as an employability skill

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: Project professional image

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: Achieve individual and professional goals

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: Manage personal finances

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: Manage stressful situations

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: Analyze effects of family on work and work on family

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: Apply lifelong learning skills

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: Manage professional development

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: Use teamwork to solve problems

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: Conduct team meetings

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: Demonstrate proficiency in technical documentation

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: Demonstrate proficiency in technical report writing

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: Comply with local, state, and federal regulations

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builder

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: Maintain personal safety and hygiene

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: **Demonstrate general knowledge of basic chemistry**

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: **Demonstrate general knowledge of the human body**

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: Demonstrate knowledge of the circulatory/ cardiovascular system

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: Demonstrate knowledge of the lymphatic system

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: Demonstrate knowledge of the urinary system

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: Demonstrate knowledge of the reproductive system

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: Demonstrate knowledge of the senses

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: Demonstrate knowledge of immunology

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: **Comply with medical law and ethics**

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: **Exhibit ethical behavior**

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: **Describe legal ramifications of misconduct**

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: Practice discretion regarding patient information

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: Practice personal professional protocol with medical community

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: Analyze factors that influence a patient's response to stress

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: Analyze physiological response to stress

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: **Analyze psychological response to stress**

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: **Provide care for a patient with an ineffective coping response**

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: Explain human growth and development

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: Demonstrate appropriate communication techniques

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: Establish rapport

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: Use emergency procedures

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: Perform first aid

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: **Respond to medical emergencies**

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: Maintain medical records and laboratory reports

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: Prepare office communications

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: Use office equipment

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: Demonstrate knowledge of different payment systems

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: Perform diagnostic coding

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: Process insurance claims/forms

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: Perform financial functions

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Vital Signs

Competency: Interview patient

Competency Builders:

Complete patient information sheets
Record medical history (e.g., allergies, current medications)
Assess bio-psycho-social condition
Validate data with patient or patient's family member(s)

Competency: Measure temperature

Competency Builders:

Follow safety and aseptic precautions for taking temperature
Identify normal range and average temperature of oral, axillary, tympanic, and rectal methods of measuring body temperature
Identify factors that may affect temperature
Select route for measuring temperature
Demonstrate use of different types of thermometers
Record temperature measurements
Report abnormal temperature measurements
Maintain thermometer(s)

Competency: Measure pulse

Competency Builders:

Identify criteria for selecting pulse site (e.g., femoral, apical, radial)
Identify normal pulse range for different age groups
Identify factors that may affect pulse
Identify variations from normal pulse that should be reported
Record pulse

Competency: Measure respiration

Competency Builders:

Assess lung sounds
Measure rate, depth, and rhythm of respiration
Identify normal respiratory rate for different age groups
Report signs of compromised respiration
Identify factors that may affect respiration
Record respiration

Competency: Measure blood pressure

Competency Builders:

Identify myths and misconceptions related to blood pressure and hypertension
Identify etiology of hypertension
Identify consequences of untreated hypertension
Identify normal range of blood pressure for different age groups
Record blood pressure
Identify factors that affect blood pressure
Select appropriate cuff size
Describe the effect of inappropriate cuff size on accurate blood pressure reading
Identify variations from normal blood pressure that should be reported
Demonstrate use of aneroid sphygmomanometer gmomanometer
Demonstrate use of mercurial sphygmomanometer gmomanometer
Demonstrate palpated blood pressure

Competency: **Obtain physical measurements**

Competency Builders:

Measure adult height
Measure adult weight
Measure adult chest and waist expansion
Measure infant height
Measure infant weight
Measure infant head and chest circumference
Measure auditory status (e.g., tympanogram)
Measure visual status (e.g., eye chart)
Identify color blindness
Record all results

Unit: Nutrition

Competency: Identify fundamentals of nutrition

Competency Builders:

Identify nutrients and food groups
Explain role of nutrients to body functions
Explain regional, cultural, and religious food patterns
List factors which must be considered when purchasing food
Identify component of a balanced diet across the life span (e.g., USDA Food pyramid)
List factors which must be considered when storing food
Identify methods of food preparation
Instruct patient in sound nutrition principles

Competency: Identify nutritional needs related to special conditions and/or diseases

Competency Builders:

Describe common diets related to health alterations (e.g., pureed, mechanical-soft)
Describe special diets
Identify community resources
Identify risks of non-compliance with dietary restrictions
Educate patient regarding dietary hazards (e.g., caffeine, fats)

Competency: Draw correlation between diet and exercise

Competency Builders:

Identify methods of exercise
Explain effect of exercise and food on energy level
Write an exercise plan
Identify weight-related issues

Competency: **Identify facets of alternative nutrition**

Competency Builders:

Identify indications and effects of tube feedings
Identify indications and effects of intravenous fluids
Identify indications and effects of lipids
Identify indications and effects of hyperal

Unit: Basic Pharmacology

Competency: Maintain supply of medications

Competency Builders:

Check inventory stock
Contact supplier
Rotate stock
Process narcotic forms (i.e., Drug Enforcement Agency (DEA) license)
Store medications properly
Prepare expired medications for disposal
Dispose of medications properly (i.e., comply with government regulations)

Competency: Calculate dosage according to physician's orders

Competency Builders:

Verify accuracy of medical orders
Use Physician's Desk Reference (PDR)
Transcribe medication order
Calculate oral dosage
Calculate parenteral dosage
Calculate sublingual dosage
Calculate pediatric dosage
Calculate intravenous dosage and rate of flow

Competency: Instruct patients on use of medications

Competency Builders:

Provide verbal and/or written instructions for medication use
Explain use of medications (e.g., identify side effects, adverse effects, interactions)
Maintain standing orders according to physician's protocol (e.g., prescription refills)

Competency: Dispense medications according to medical orders

Competency Builders:

Identify patient
Verify patient allergies
Use reference materials
Verify accuracy of medical orders
Calculate dosages
Prepare oral medication
Identify correct anatomical sites
Prepare intramuscular, intradermal, and subcutaneous injectable medications
Prepare and administer sublingual medications
Prepare transdermal medications
Prepare inhalant medications
Prepare instillation medications
Prepare and administer topical medications
Prepare and administer rectal medications
Prepare and administer vaginal medications
Assist with administration of local anesthesia
Administer medications
Document medication administration
Document patient response to medications

Competency: Evaluate response to medication

Competency Builders:

Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medication

Unit: Patient Education

Competency: Inform patient/family about diagnostic procedures

Competency Builders:

Distribute literature regarding advised procedure
Explain diagnostic procedures
Explain preparation for diagnostic procedures
Translate medical terminology into lay terms
Distribute resource materials related to test results
Schedule patient follow-up
Obtain informed consent signature

Competency: Educate patient/responsible party about self-care related to results of diagnostic procedure/therapy

Competency Builders:

Identify support groups and resources
Obtain verbal and written information to plan patient's care
Reinforce special diets with patient/responsible party
Reinforce recommended exercise programs with patient/responsible party
Reinforce specialized applications (e.g., ortho, dietary, ostomy, splints, orthotics) with patient/responsible party
Reinforce self-administration of medications with patient/responsible party
Reinforce health maintenance techniques with patient/responsible party
Refer patient/responsible party to support groups and resources
Solicit patient/responsible party feedback
Record teaching and patient response
Instruct patient/responsible party in necessary adaptations to environment
Instruct patient/responsible party in adaptive techniques (e.g., activities of daily living, homemaking)

Competency: Provide psycho-social care for patient/family

Competency Builders:

Arrange emotional support for patient and family member(s)
Report child abuse and/or neglect
Respond to emotional needs of terminally ill patient and family member(s)
Apply reality orientation technique
Arrange diversional activity for patient

Competency: Inform patient about World Health Organization (WHO) immunization requirements

Competency Builders:

Instruct patient/family on infant, preschool, adolescent, and adult immunizations
Instruct patient/family on international requirements
Reinforce instructions from other health professionals to patient/family member(s)

Unit: Laboratory Tests and Diagnostic Procedures

Competency: Perform drug screen testing

Competency Builders:

Demonstrate safe use of equipment
Record results accurately
Collect and label specimen accurately

Competency: Perform tuberculosis testing

Competency Builders:

Administer tine test
Administer Mantoux test
Interpret test results

Competency: Perform specimen collection and handling

Competency Builders:

Collect eye, nose, and throat specimens for culture
Collect urine (e.g., clean-catch, sterile, 24-hour, midstream, catheter)
Collect stool specimen
Demonstrate proper techniques to perform venipuncture and capillary puncture
Collect wound specimens
Collect sputum specimens
Collect capillary blood
Collect venous blood using syringe
Collect venous blood using vacutainer
Label all collected specimens properly
Package specimen for mailing/shipping
Transport specimen
Differentiate among timed specimens, fasting specimens, and state specimens
Describe general criteria for suitability of a specimen for analysis
Describe conditions that must be met if specimens and tests are to be used as legal evidence

Competency: **Assist with allergy testing**

Competency Builders:

Prepare tray
Perform scratch test (e.g., ID test)
Perform patch test
Perform intradermal test

Competency: **Perform manual and automated tests of complete blood count**

Competency Builders:

Perform hematocrit (Hct)
Perform hemoglobin determination (hgB)
Perform red blood cell counts (RBC)
Perform white blood cell counts (WBC)
Perform white blood cell differential (diff)
Perform erythrocyte sedimentation rate (ESR)
Perform prothrombin time (PT)

Competency: **Perform serological tests**

Competency Builders:

Prepare serum
Perform serum blood chemistries
Separate plasma or serum from cells
Perform ABO and Rh typing
Perform monospot test
Perform serum pregnancy test (HCG)
Package record data and set-up delivery of blood samples

Competency: Perform electrocardiograms

Competency Builders:

Mount a 12-lead electrocardiogram
Run and record a standard
Set-up Holtor monitors
Clean electrocardiogram equipment

Competency: Perform diagnostic skills

Competency Builders:

Perform neurological checks
Perform urinary tests (e.g., sugar and acetone, protein, ketones, specific gravity)
Assist with laboratory tests (e.g., blood gases, lumbar puncture)
Measure blood glucose level
Maintain monitoring equipment (e.g., cardiac monitor, pulse oximeter)
Measure central venous pressure (CVP)
Perform electrocardiogram (ECG)
Perform visual screening
Perform auditory screening

Competency: Demonstrate laboratory procedures in clinical chemistry

Competency Builders:

List requirements for patient preparation
Describe special collection techniques (e.g., 24 hr. urine G)
Handle specimen properly
Correlate test procedure to methodology
Identify normal versus panic values
Identify clinical significant

Competency: **Demonstrate laboratory procedures in hematology/coagulation**

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal versus panic values
Identify clinical significance of test value

Competency: **Demonstrate laboratory procedures in immunohematology**

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal versus panic values
Identify clinical significance of test value

Competency: **Demonstrate laboratory procedures in microbiology**

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal verses panic values
Identify clinical significance of test value

Competency: Demonstrate laboratory procedures in immunology

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal verses panic values
Identify clinical significance of test value

Competency: Demonstrate laboratory procedures in urinalysis

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal verses panic values
Identify clinical significance of test value

Competency: Demonstrate safe phlebotomy techniques

Competency Builders:

Assemble equipment (e.g., vacutainers, bottles)
Differentiate venous versus arterial collection procedures (e.g., Allen test)
Prepare patient for procedure (e.g., establish rapport)
Care for phlebotomy site
Collect capillary blood
Collect venous blood with syringe
Collect venous blood with vacutainer
Collect blood culture
Handle specimen(s) properly

Competency: Administer laboratory management skills

Competency Builders:

Describe different management styles
Explain personnel evaluation process
Apply accounting principles
Analyze statistical data
Schedule personnel equitably
Negotiate contracts
Identify regulatory agencies (e.g., OSHA, CAP, JCAHO, AABB)
Explain Clinical Laboratory Improvement Amendment

Unit: Clinical Chemistry

Competency: Use terminology related to clinical chemistry

Competency Builders:

Define clinical chemistry terms
Spell clinical chemistry terms
Identify the designations used for weights and measures
Use the abbreviations for weights and measures

Competency: Prepare solutions

Competency Builders:

Prepare molar solutions
Prepare normal solutions
Prepare percentage solutions (e.g., w/w, w/v, v/v)

Competency: Handle blood specimens for analysis

Competency Builders:

List differences between serum, plasma, and whole blood
Use anticoagulants for each analysis performed
Explain effects of using improper anticoagulants
Explain ways to prevent hemolysis
Collect blood in collecting tubes for analysis (e.g., clotted, anticoagulant)

Competency: Handle body fluids for chemical analysis

Competency Builders:

List types of urine preservatives
Explain when different types of urine preservatives are used
Perform cerebral spinal fluid analyses
Perform analyses of other body fluids
Apply Beer's Law

Competency: Perform kidney function and clearance tests

Competency Builders:

Explain kidney function tests
Perform kidney function tests (e.g., creatinine)
List the normal values of kidney function tests
Explain kidney clearance tests
Perform kidney clearance tests (e.g., creatinine clearance)
List the normal values of kidney clearance tests
Calculate kidney function tests
Identify kidney related pathologies (e.g., renal failure)

Competency: Perform liver function tests

Competency Builders:

Identify liver function tests
Perform liver function tests
Identify tests that are elevated in liver disease
Identify liver enzymes and isoenzymes
List normal values of liver function tests
Identify abnormal values
Identify liver related pathologies (e.g., cirrhosis)
Identify tests that are elevated in obstructive jaundice
Identify tests that are elevated in hemolytic jaundice

Competency: Perform glucose tests

Competency Builders:

Define terminology related to carbohydrates
List the uses of carbohydrates by the body
Describe the tests for all carbohydrates and reducing substances
Describe the true glucose tests (glucose specific)
Perform blood tests for glucose
Perform urine tests for glucose
Perform spinal fluid tests for glucose
Perform oral glucose tolerance test
Perform intravenous glucose tolerance test
Differentiate among a normal glucose tolerance curve, a diabetic glucose tolerance curve, and a hypoglycemia curve
Identify normal values

Competency: Perform protein tests

Competency Builders:

List functions of proteins
List what makes up a total protein
Explain the A/G ratio
List body constituents made up of protein (e.g., hemoglobin, fibrinogen, enzymes)
Explain the methods of total protein analysis
List normal values of total protein analysis
Explain the principles of total protein analysis tests
Explain the various methods of albumin analysis
List the normal values of albumin analysis
Explain the principles of albumin analysis tests
Explain the various methods of globulin analysis
List the normal values of globulin analysis
Explain the principles of globulin analysis tests
Explain the principle of protein electrophoresis
Explain the various procedures for protein electrophoresis
Describe the proper migration pattern of the plasma proteins
Identify electrophoretic patterns in disease
Perform various methods for protein tests

Competency: Perform electrolytes tests

Competency Builders:

Define cations and anions
Explain electrolyte balance
Define extracellular cations and anions
Define intracellular cations and anions
List the normal values of cations and anions
Perform tests for anions and cations
List abnormal values
Calculate anion gap
Explain methods of electrolyte testing

Competency: Perform carbon dioxide tests

Competency Builders:

Explain different carbon dioxide tests
Perform different carbon dioxide tests
Identify normal values of carbon dioxide tests
Identify abnormal values

Competency: Perform blood gas tests

Competency Builders:

List normal blood gas values
Explain the various methods of blood gas analysis
Perform blood gas analysis
Identify abnormal values
Identify respiration acidosis/alkalosis
Identify metabolic acidosis/alkalosis

Competency: Explain mineral metabolism

Competency Builders:

List the minerals of the body
Describe mineral metabolism
List normal values
List abnormal values
Perform mineral analysis

Competency: Perform enzyme analysis

Competency Builders:

Describe methods of enzyme analysis
List the enzymes of the pancreas and their functions
Describe the tests used to determine pancreatic enzyme activities
List the enzymes and isoenzymes of the heart and their functions
List the order in which enzymes and/or isoenzymes of the heart rise and return to normal
Explain LDH1:2 flip
Explain the use of acid phosphatase
Perform various enzyme analysis tests
List the enzymes and isoenzymes of the liver and their functions
Explain the use of acid phosphatase
List the parts of the body that are rich in acid phosphatase
List normal ranges

Competency: Perform thyroid gland tests

Competency Builders:

Explain the function of the thyroid gland
Explain various thyroid function tests
Perform thyroid function tests
List normal values of thyroid function tests
Identify thyroid related pathologies (e.g., hyperthyroid disease)

Competency: Perform tests for gout

Competency Builders:

Explain the principle of the test for gout (uric acid)
Perform the test for uric acid
List the metabolism of purines in food
Explain how uric acid is formed

Competency: Perform miscellaneous tests

Competency Builders:

Perform gastric analysis
Perform phenolsulfonphthalein test
Explain principles of electrophoresis
Perform therapeutic drug monitoring
Perform tests for drug abuse
Identify therapeutic values
Perform tests for HDL, LDL, VLDL, cholesterol, triglyceride, and other lipids

Competency: Use laboratory instruments

Competency Builders:

List the parts of the photoelectric colorimeter and their functions
Explain the principle of the photoelectric colorimeter
Use a photoelectric colorimeter
List the parts of the spectrophotometer and their functions
Explain the principle of the spectrophotometer
Explain the difference between a colorimeter and a spectrophotometer
Describe how light waves are measured
Use a spectrophotometer
Define terminology related to light and wavelengths
Calibrate a colorimeter and spectrophotometer
List the parts of a flame photometer and their functions
Explain the principle of the flame photometer
List the chemicals that are analyzed by the flame photometer
Use a flame photometer

Competency: Use laboratory instruments (continued)

Competency Builders:

List the parts of an atomic absorption spectrophotometer and their functions
Explain the principle of the atomic absorption spectrophotometer
List the uses of the atomic absorption spectrophotometer
Use an atomic absorption spectrophotometer
List the parts of the fluorescence spectrophotometer and their functions
Explain the principle of the fluorescence spectrophotometer
List the tests performed on the fluorescence spectrophotometer
Use a fluorescence spectrophotometer
List the parts of continuous flow analysis and their functions
Perform continuous flow analysis
List the instruments that perform discrete analysis, the parts related to them, and their functions
Use discrete analysis instruments
List the parts of a random access analyzer and their functions
Explain the principle of the random analyzer
List the chemicals that are analyzed by a random analyzer
Use a random analyzer
List the parts of a radioimmunoassay (RIA) analyzer and their functions
Explain the principle of an RIA analyzer
List the chemicals that are analyzed by an RIA analyzer
Use an RIA analyzer
List the parts of an enzyme immunoassay (EIA) analyzer and their functions
Explain the principle of an EIA analyzer
List the chemicals that are analyzed by an EIA analyzer
Use an EIA analyzer
List the parts of a nephelometer analyzer and their functions
Explain the principle of a nephelometer analyzer
List the chemicals that are analyzed by nephelometer analyzer
Use a nephelometer analyzer
List the parts of an osmometer analyzer and their functions
Explain the principle of an osmometer analyzer
List the chemicals that are analyzed by an osmometer analyzer
Use an osmometer analyzer
List the parts of an ultraviolet spectrophotometer analyzer and their functions
Explain the principle of an ultraviolet spectrophotometer analyzer
List the chemicals that are analyzed by an ultraviolet spectrophotometer analyzer
Use an ultraviolet spectrophotometer analyzer

Competency: Use laboratory instruments (continued)

Competency Builders:

List the parts of a fluorescence polorization immunoassay (FPIS) analyzer and their functions
Explain the principle of an FPIS analyzer
List the chemicals that are analyzed by an FPIS analyzer
Use an FPIS analyzer
Use other laboratory instruments (e.g., balance, pH meter, refractometer, blood gas apparatus, electrophoresis apparatus, automatic pipette, burette)

Competency: Maintain laboratory instruments

Competency Builders:

Maintain chemical analyzers
Maintain other laboratory instruments (e.g., balance, pH meter, refractometer, blood gas apparatus, electrophoresis apparatus, automatic pipette, burette)
Clean glassware and pipettes
Maintain glassware and pipettes

Unit: Immunohematology

Competency: **Use terminology related to immunohematology**

Competency Builders:

Define immunohematology-related terminology
Spell immunohematology-related terminology
Define secretors
Explain significance of secretors in immunohematology
Identify blood components

Competency: **Explain antigens and antibodies**

Competency Builders:

Explain the principle of antigen-antibody reactions
Describe the history of the ABO system and the Rh system
Chart the chemical structure of the H, A, and B antigens
Describe the antigens of the ABO system
Describe the antibodies of the ABO system
List the phenotypes and genotypes of the Rho(D) system
Explain the genetics of blood group antigen
Describe additional antigen systems (e.g., M&N, Duffy, Lewis, Kell)

Competency: Describe antibodies

Competency Builders:

List the five major immunoglobulins
List the immunoglobulins or antibodies that are important in the ABO and Rh systems
List the natural antibodies and their functions
List the 7S and 19S antibodies and their functions
Explain the function of bivalent or complete antibodies
Explain the function of univalent, incomplete, or blocking antibodies
Explain Zeta potential
Describe how the anti-human globulin helps in detecting the blocking, univalent, or incomplete antibody
Explain how anti-human globulin is produced

Competency: Describe subgroups of A

Competency Builders:

List the subgroups of A
Describe how subgroups of A are tested

Competency: Describe enzyme tests

Competency Builders:

List the enzyme tests that are used in immunohematology
Differentiate purposes and methods of enzyme tests used in immunohematology

Competency: Describe Rh nomenclatures

Competency Builders:

Explain Fisher-Race nomenclature
Explain Wiener nomenclature
Explain Rosenfeld nomenclature
Compare Fisher-Race, Wiener, and Rosenfeld nomenclatures

Competency: Perform Du test

Competency Builders:

Perform Du test in Rh typing
Perform Du test to choose donors for transfusions
Perform Du test for blood recipients

Competency: Describe M and N systems

Competency Builders:

Differentiate M and N systems
Use M and N systems in immunohematology

Competency: Type blood

Competency Builders:

Perform direct or forward blood group slide and tube method
Perform reverse typing
Perform Rho(D) typing–slide and tube
Perform typing for subgroups of A
Perform genotyping
Explain the principle of the antiglobulin test
Explain the principle of the indirect antiglobulin test
Perform indirect antiglobulin test
Interpret indirect antiglobulin test
List the uses of the indirect antiglobulin test
Perform direct antiglobulin test
Interpret direct antiglobulin test
List uses of direct antiglobulin test
List drugs responsible for red blood cell sensitization that cause a positive direct antiglobulin test
Perform direct antiglobulin profile
Interpret the direct antiglobulin profile

Competency: Crossmatch blood

Competency Builders:

Explain the principle of the crossmatch procedure
Perform crossmatch procedure (i.e., anti-human globulin crossmatch)
Interpret results of crossmatch procedure
List reasons for autocontrol on crossmatch test
Perform autocontrol test with crossmatch
Explain reasons for using Coombs control test
Perform Coombs control test
List errors that can occur in the crossmatch procedure (e.g., overmixing after centrifugation, improper washing of Coombs tube before addition of Coombs serum)
Identify incompatible crossmatch
Perform follow-up procedures for incompatibility

Competency: Use Rho(d) immune globin criteria

Competency Builders:

Explain the principle of the Rho(D) immune globin
List to whom Rho(D) immune globin should be given
List indications as to when Rho(D) should be given
List the criteria used to declare patients candidates for receiving Rho(D) immune globin

Competency: Detect cold agglutinins

Competency Builders:

Define cold agglutinins
Perform tests to detect cold agglutinins
Eliminate cold agglutinins when they interfere with blood grouping and/or crossmatching of blood

Competency: Elute antibodies

Competency Builders:

Use heat elution to elute antibodies from red blood cells
Use freeze elution to elute antibodies from red blood cells
Use acid elution to elute antibodies from red blood cells

Competency: Draw blood from donors

Competency Builders:

Explain blood donor requirements
Perform therapeutic phlebotomies
Explain various physical criteria
Explain medical history criteria

Competency: Operate blood bank

Competency Builders:

Visibly inspect units of blood
Dispose of blood bags and patient samples
Store blood and blood products for transfusion
Investigate transfusion reactions
Investigate hemolytic diseases in newborn
Describe blood components
Describe the uses of blood components
Prepare blood for storage
Store blood
Perform quality control on all reagents
Record all quality control procedures
Check label to verify blood type
Identify patient specimen properly
Follow American Association of Blood Bank (AABB) protocols

Unit: Immunology and Serology

Competency: Use immunology and serology terminology

Competency Builders:

Define terminology related to immunology and serology
Spell terminology related to immunology and serology

Competency: Perform immunologic examination

Competency Builders:

Explain the principle of immunologic examination
Identify antigen-antibody reaction
Describe the relationship of T and B cells to antibody production

Competency: Test for syphilis

Competency Builders:

Define syphilis
Describe the stages of infection
Perform different types of serological tests for syphilis

Competency: Perform VDRL, RPR, and PCT tests

Competency Builders:

Perform qualitative VDRL, RPR, and PCT tests
Perform quantitative VDRL, RPR, and PCT tests
Perform fundamentals of complement-fixation tests
List quality control procedures for all immunologic tests
Perform quality control

Competency: Perform agglutination tests

Competency Builders:

Perform febrile agglutination tests
Differentiate among Weil Felix, Widal, and febrile agglutination testing

Competency: Perform immunologic and serologic procedures

Competency Builders:

Explain theory of C-reactive protein (CRP)
Perform CRP
Explain theory of anti-Streptolysin screen (ASO) and titer
Perform ASO
Explain theory of heterophile agglutination
Perform heterophile quantitative with sheep cells, guinea pig, and horse serum absorption
Perform heterophile qualitative with latex agglutination or blood cell agglutination tests
Perform rheumatoid arthritis tests (e.g., latex agglutination)
Perform systemic lupus erythematosis (SLE or LE agglutination) tests
Perform red cell fragility tests
Perform anti-nuclear antibody tests
Perform antigen detection of organisms in spinal fluid (e.g., Directogen™ test and Bactogen™ test)
Perform fluorescent antibody procedures
Perform group typing of bacterial growth
Explain principles of test for radial immunodiffusion (RID)
Perform the test for RID
Perform serum pregnancy test (HCG)
Perform tests for hepatitis
Perform febrile agglutination tests
Perform monospot test

Competency: **Explain tests for other viruses**

Competency Builders:

Explain test for cytomegaloviris
Explain test for retrovirus
Explain test for Epstein-Barr virus
Explain test for acquired immune deficiency syndrome (AIDS)

Unit: Bacteriology

Competency: Use terminology related to bacteriology

Competency Builders:

Define terms related to bacteriology
Spell terms related to bacteriology
Identify types of bacteria by shapes
Describe the growth curve of bacteria

Competency: Identify types and uses of culture media

Competency Builders:

Identify the different culture medias
List the uses of the different culture medias

Competency: Culture specimens

Competency Builders:

Select appropriate culture media
Use concentration methods for sputum specimens to be cultured for acid-fast bacilli
Culture sputums for acid-fast bacilli
Examine smears for acid-fast bacilli
Type cultures using type-specific typing sera
Perform proper plating techniques

Competency: **Prepare culture media**

Competency Builders:

Prepare blood agar, Mueller-Hinton, and broth culture media
Use additives (e.g., enrichments, inhibitors, indicators, salts, buffers) in preparing culture media
List the uses of culture media (i.e., bile esculin agar, bismuth sulfite [BS], blood agar, Bordet-Gengou, brilliant green agar, chocolate agar with V and X factors, chopped meat glucose broth, cornmeal agar, cystine tellurite blood agar, desoxycholate agar, desoxycholate citrate agar, eosin methylene blue [EMB], Flides enrichment agar, Loeffler's, Lowenstein Jensen [L-J], MacConkey)

Competency: **Stain smears**

Competency Builders:

Explain staining procedures (i.e., Gram's, hot and cold acid-fast, Giemsa and Wright's, Albert's, negative or relief, spore, capsule, flagella, India ink, fluorescent, and methylene blue)
Describe uses of different stains
Perform stains

Competency: Perform differentiating tests

Competency Builders:

Perform coagulase test
Perform bile exculin test
Perform bile solubility test
Perform catalese test
Perform oxidase test
Perform optochin disc test
Perform bacitracin disc test
Perform beta lactam disk test

Competency: Identify gram-positive cocci

Competency Builders:

Isolate gram-positive cocci
Identify gram-positive cocci
Differentiate one gram-positive cocci from another
Differentiate normal/pathologic flora

Competency: Identify gram-positive bacilli

Competency Builders:

Isolate gram-positive bacilli
Identify gram-positive bacilli
Differentiate one gram-positive bacilli from another
Differentiate normal/pathologic flora

Competency: Identify gram-negative cocci

Competency Builders:

Isolate gram-negative cocci
Identify gram-negative cocci
Differentiate one gram-negative cocci from another
Differentiate normal/pathologic flora

Competency: Identify gram-negative enterobactereaceae

Competency Builders:

Isolate gram-negative Enterobactereaceae
Identify gram-negative Enterobactereaceae
Differentiate genera and species
Differentiate normal from pathologic flora

Competency: Identify gram-negative bacilli

Competency Builders:

Isolate nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli (i.e., Pseudomonas, Bordetella, Hemophilis, Brucella, and Campylobacter)
Identify nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli
Differentiate nonfermenting gram-negative bacilli and the so-called miscellaneous gram-negative bacilli
Differentiate normal from pathologic flora

Competency: Perform antimicrobial sensitivity testing

Competency Builders:

Use Kirby-Bauer system
Use MIC system
Use automated system

Competency: Use bacterial identification systems

Competency Builders:

Describe systems for bacterial identification (i.e., API, enterotube, automated systems, biochemical, and carbohydrate systems)
Perform bacterial identification using biochemical and carbohydrate system
Perform group typing of bacterial growth
Perform antigen detection of organism in spinal fluid (e.g., Dimetogen™ test and Bactogen™ test)

Competency: Culture specimens

Competency Builders:

Culture specimens (e.g., blood urine, stool [feces], sputum, throat, spinal fluid, urethral/cervical)
Use concentration methods for sputum specimens to be cultured for acid-fast bacilli
Culture sputums for acid-fast bacilli
Examine smears for acid-fast bacilli
Type cultures using type-specific typing sera

Competency: Perform routine mycology procedures

Competency Builders:

Perform KOH preparation
Perform methylene blue staining
Perform lacto-phenol cotton blue staining
Perform culture using Sabaroud agar
Use germ tube
Use cornmeal agar
Perform India ink preparation

Competency: Perform special tests

Competency Builders:

Perform group A streptococci rapid enzyme immunoassay test (or other detection kits) from throat swabs
Perform group A streptococci cultures for beta hemolysis screening
Perform clostridium difficile toxin test

Unit: Parasitology

Competency: Use parasitology-related terminology

Competency Builders:

Define terminology related to parasitology
Spell terminology related to parasitology
Identify types of parasites (i.e., protozoa, helminthes)
Describe types of parasites
Classify parasites

Competency: Perform examinations for parasites

Competency Builders:

Examine feces for parasites (i.e., macroscopic examination, microscopic direct saline and iodine preparations, and various concentration methods)
Examine blood, urine and other body fluids for parasites
Examine tissue for parasites
Perform direct method examination for intestinal parasites (i.e., protozoa, trematodes, cestodes, nematodes)
Perform concentration method examination for intestinal parasites

Competency: Perform tests for blood parasites

Competency Builders:

Perform test for malaria
Perform test for filaria
Perform test for trypanosomes

Competency: Perform tests for fats and occult blood

Competency Builders:

Prepare Sudan IV stain for fats
Examine stool for fats
Perform test for occult blood in stool

Competency: Stain for ova and parasites

Competency Builders:

Prepare permanent smears for ova and parasites
Stain permanent smears for ova and parasites using iron bematoxylin method
Stain permanent smears for ova and parasites using trichrome method
Describe the defining characteristics of the cryptosporidium species
Identify cryptosporidium
Stain cryptosporidium

Unit: Urinalysis

Competency: Use terminology related to urinalysis

Competency Builders:

Define terminology related to urinalysis
Spell terminology related to urinalysis

Competency: Identify properties of urine

Competency Builders:

Explain the formation of urine
Describe the anatomy of the kidney
Identify the physical properties of urine
Identify the chemical properties of urine
Identify the microscopic structures found in urine

Competency: Explain principles of urine tests

Competency Builders:

Explain the role of specific gravity in urine tests
Explain the role of pH in urine tests
Explain the role of protein in urine tests
Explain the role of glucose in urine tests
Explain the role of ketones in urine tests
Explain the role of occult blood in urine tests
Explain the role of nitrate in urine tests
Explain the role of bilirubin in urine tests
Explain the role of urobilinogen in urine tests
Explain the role of leukocyte esterase in urine tests

Competency: Perform special tests

Competency Builders:

Perform Addis count
Perform Ehrlich's test for urobilinogen
Perform Fishberg concentration and dilution
Perform Fantus test for chloride
Perform Gerhardt's diacetic acid test, and Linderman's test for diacetic acid
Perform Gmelin's test, Harrison's test, Smith's test, and Ictotest™ (Ames) for bilirubin
Perform heat and acetic acid test and sulfosalicylic acid test for protein
Perform Heller's ring test for albumin
Perform Lang's nitroprusside test, Robert's test, and Rother's test for acetone
Perform Mosenthal's concentration test
Perform Sulkowitch test for calcium
Perform test for indican Obermeyer's
Perform Watson's test and the Watson-Schwartz test for porphyrins
Perform Bence Jones protein test
Perform sulfosalicylic acid test for protein
Perform test for acetone
Perform tests for reducing substances

Competency: Identify cells found in urine

Competency Builders:

Identify blood cells found in urine
Describe blood cells found in urine
Identify types of epithelial cells found in urine
Describe types of epithelial cells found in urine
Explain the cause of each type of cell appearing in urine

Competency: Identify casts found in urine

Competency Builders:

Describe casts found in urine
Describe cases found in urine
Explain how casts are formed
Explain where casts are formed
Describe the causes of each type of cast found in urine

Competency: Identify foreign matter found in urine

Competency Builders:

Describe types of pathological crystals found in urine
Identify mucus found in urine
Explain the significance of mucus found in urine
Identify parasites found in urine
Explain the significance of parasites found in urine
Identify spermatozoa in urine
Explain the significance of spermatozoa in urine
Identify bacteria found in urine
Explain the significance of bacteria found in urine
Identify cylindroids found in urine
Explain the significance of cylindroids in urine
Identify yeast found in urine
Explain the significance of yeast found in urine
Identify amorphous material found in urine
Explain the significance of amorphous material found in urine

Unit: Hematology

Competency: Use hematology terminology

Competency Builders:

Define terminology related to hematology (e.g., erythrocytes, lymphopoieses)
Spell terminology related to hematology

Competency: Demonstrate knowledge of erythrocytes

Competency Builders:

Explain the life cycle and life span of erythrocytes
Explain the maturation series of an erythrocyte from its origin to its final destination in the peripheral blood stream
Explain the formation of bilirubin from the destruction of erythrocytes
Identify pathologies of erythrocytes (e.g., anemias)
Identify normal and abnormal values

Competency: Perform erythrocyte tests

Competency Builders:

Explain automated erythrocyte testing
Identify normal erythrocyte values
Perform erythrocyte counts (automated and manual)
Perform hemoglobin determinations
Perform macrohematocrit and microhematocrit determinations
Perform tests (e.g., mean corpuscular volume—MCV, corpuscular hemoglobin—MCH, and corpuscular hemoglobin concentration--MCHC) used in erythrocyte indices
Explain principles and uses of erythrocyte sedimentation rate (ESR)
Describe the types and purpose of Wintrobe, Westigren, and Zeta sedimentation rates
Perform each ESR procedure
Perform mathematical calculations for MCV, MCH, and MCHC
Perform reticulocyte counts
perform sickle cell tests
Perform fetal hemoglobin test

Competency: Demonstrate knowledge of granulocytes, lymphocytes, and monocytes

Competency Builders:

Explain the maturation series of the neutrophilic granulocytes
Explain the maturation series of the granulocytic eosinophils and basophils
Explain the maturation series of the nongranulocytes-lymphocytes
Explain the maturation series of the nongranulocytes-monocytes
Explain the maturation series of the thrombocytes (i.e., platelets)
Explain the origin and function of granulocytes, lymphocytes, and monocytes
Identify normal percentages of granulocytes, lymphocytes, monocytes, and thrombocytes
Identify pathologies of white blood cells (e.g., leukemia)
Identify pathologies of thrombocytes
Identify normal and abnormal values

Competency: Prepare blood smear stains

Competency Builders:

Make a blood film/smear
Use leukocyte alkaline phosphatase stain
Stain blood films using Wright's and Giemsa's stains
Stain thick smear for malaria
Make cytospin slide
Use Hansel stains on nasal secretions for eosinophiles
Stain bone marrow smears

Competency: Perform blood counts and tests

Competency Builders:

Identify functions and elements of blood
Describe the dimensions of the counting chamber
Calculate leukocyte and erythrocyte counts using counting chamber
Perform leukocyte counts
Perform thrombocyte counts
Perform white blood cell differential counts
Perform leukocyte counts on very low very high counts using the manual pipette method
Correct leukocyte counts in the presence of nucleated red blood cells
Describe principles of automated cell counters (e.g., Coulter principle and laser principle)
Perform reticulocyte counts
Perform direct eosinophile counts
Perform sickle cell tests
Perform fetal hemoglobin test

Competency: Perform body fluid counts

Competency Builders:

Perform thoracentesis fluid count
Perform pleural fluid counts
Perform spinal fluid counts
Perform joint fluid counts for cells and crystals

Competency: Perform sperm counts

Competency Builders:

Define motility
Describe morphological abnormalities
Analyze appearance
Analyze consistency

Competency: Perform coagulation and hemostasis tests

Competency Builders:

Describe principle of hemostasis
Explain the principle of prothrombin time (PT) test
Identify coagulation factors tested for when performing prothrombin time (PT)
Perform PT test
Explain the principle of partial thromboplastin time (PTT or APTT) test
Identify coagulation factors by Roman numeral and common name
Identify coagulation factors tested for when PTT test
Perform PTT or APTT test
Explain the principle of capillary bleeding and clotting time tests
Perform capillary bleeding and clotting time tests
Identify uses of Lee White coagulation time test
Perform Lee White coagulation time test
Perform Duke and Ivy bleeding time test
Identify uses of template bleeding time test
Perform template bleeding time test
Explain the principle of fibrinogen test
Perform fibrinogen test
Explain the principles of fibrin degradation test
Perform fibrin degradation product (FDP) and fibrin split product (FSP)
Explain the principle of fibrin monomere test
Perform fibrin monomere test
Identify uses of clot retraction test
Perform clot retraction test
Perform factor assays

Competency: Maintain related instruments and equipment

Competency Builders:

Demonstrate proper use of microscope and centrifuge
Demonstrate proper use of glassware and pipettes
Demonstrate proper use of automated coagulation and hematology equipment
Clean related instruments and equipment
Store related instruments and equipment
Report needed repairs

Competency: Perform quality control

Competency Builders:

Check temperature of coagulation instruments
Check temperature of hematology instruments
Check reagents of coagulation instruments
Check reagents of hematology instruments
Check maintenance of coagulation instruments
Check maintenance of hematology instruments
Perform manufacturer-specific quality control test procedures
Label reagents
Inspect reagents
Prepare reagents

Unit: Phlebotomy

Competency: **Demonstrate knowledge of health care institutions and departments in which a phlebotomist functions**

Competency Builders:

Identify the health care providers in hospitals and clinics
Describe the organizational structure of the clinical laboratory department
Discuss the roles of clinical laboratory personnel
Discuss the qualifications for clinical laboratory personnel
List the types of laboratory procedures run in the various sections of the clinical laboratory department
Describe the role of the clinical laboratory in assessing body functions

Competency: **Identify the phlebotomist's role as a member of a health care team**

Competency Builders:

Describe the various facilities and departments in which the phlebotomist interacts
Describe the major functions of the various facilities and departments in which the phlebotomist interacts

Competency: **Describe collection equipment, reagents, and interfering factors in blood collection**

Competency Builders:

Describe the types of patient specimens that are analyzed in the clinical laboratory
Describe the phlebotomist's role in collecting and transporting these specimens to the laboratory
List the supplies that should be carried on a phlebotomist's tray when collecting microspecimens
Describe substances that can interfere in clinical analysis of blood constituents
Describe procedures used to avoid interference in clinical analysis of blood constituents
List the types of equipment needed to perform a venipuncture
Explain the special precautions employed when collecting blood from a newborn infant
Explain the types of equipment needed to collect blood from a newborn infant
List the equipment needed to perform a heel stick collection on an infant

Competency: **Describe proper blood collection procedure, including handling complications that may arise**

Competency Builders:

Discuss the legal and ethical importance of proper patient/sample identification
Identify potential sites for venipuncture
Identify potential sites for capillary puncture
List what effects tourniquet, hand squeezing, and heating pads have on skin puncture
List what effects tourniquet, hand squeezing, and heating pads have on venipuncture
Establish a recollection policy
Identify criteria for rejection of a patient sample for testing
Describe why some sites are more difficult to draw blood from then others
Identify which sites are more difficult to draw blood from
Name frequent causes of phlebotomy complications
Explain frequent causes of phlebotomy complications

Competency: **Demonstrate knowledge of the disease process route of infection, infection control, and equipment safety**

Competency Builders:

Identify the potential routes of infection
Identify the methods for infection prevention
Perform protocol for obtaining a sterile site

Competency: **Explain the protocol for communication, transport, and processing specimens**

Competency Builders:

Explain the correct procedure for complying with the request for collection of routine specimens
Explain the correct procedure for complying with the request for collection of special specimens
Explain the rationale for the various methods of transport
Explain the procedure for processing specimens for routine testing from specimen labeling to result reporting manual or computer systems
Explain the reasons for processing procedures
Identify essential information that should be on the laboratory requisition or computer order entry
Describe the significance of time constraints for specimen delivery to the analytical area
Describe schedule constraints imposed by timed operational factors in the laboratory
Identify the precautions applicable to verbal test ordering and reporting
Evaluate results of quality control techniques in specimen collection
Implement corrective quality control techniques where indicate

Competency: **Apply quality control and safety procedures**

Competency Builders:

Describe a system for monitoring quality assurance in the collection of blood specimens
Identify policies and procedures used in the clinical laboratory to assure quality in the obtaining of blood specimens
Design a strategy to implement a quality assurance program in the specimen collection section of the clinical laboratory
Describe safety measures that should be followed at all times by the phlebotomist when collecting blood specimens
Evaluate the electrical, radiation, and fire safety procedures used in the phlebotomy clinical laboratory setting

Competency: **Describe basic concepts of communications, stress management, professional behavior, and the legal implications of the health-related work environment**

Competency Builders:

Describe the protocol for preparing a patient for laboratory testing
Describe the preferred techniques for dealing with family and visitors during the blood specimen collection
Explain intra-laboratory communications techniques
Explain inter-laboratory communications techniques

Histotechnologist

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	**Page**
Employability Skills	HIS-3
Professionalism	HIS-8
Teamwork	HIS-12
Computer Literacy	HIS-14
Documentation	HIS-15
Infection Control and Risk Management	HIS-16
Medical Terminology	HIS-23
Anatomy, Physiology, and Pathology	HIS-24
Medical Law and Ethics	HIS-31
Psychology of Stress	HIS-33
Psychology of Human Relations	HIS-35
First Aid and Medical Emergencies	HIS-38
General Administrative Duties	HIS-40
Histology	HIS-46
Phlebotomy	HIS-51

DON'T FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: Develop a career plan

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: **Prepare for employment**

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: **Evaluate the importance of self-esteem as an employability skill**

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: Project professional image

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: Achieve individual and professional goals

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: Manage personal finances

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: Manage stressful situations

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: Analyze effects of family on work and work on family

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: Apply lifelong learning skills

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: Manage professional development

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: Use teamwork to solve problems

Competency Builders:

Identify appropriate situations for using teams,
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: Conduct team meetings

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: **Demonstrate proficiency in technical documentation**

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: **Demonstrate proficiency in technical report writing**

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: Comply with local, state, and federal regulations

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: Maintain personal safety and hygiene

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: **Demonstrate general knowledge of basic chemistry**

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: **Demonstrate general knowledge of the human body**

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: **Demonstrate knowledge of the circulatory/ cardiovascular system**

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: **Demonstrate knowledge of the lymphatic system**

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: **Demonstrate knowledge of the respiratory system**

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: **Demonstrate knowledge of the digestive system**

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: **Demonstrate knowledge of the endocrine system**

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: Demonstrate knowledge of the urinary system

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: Demonstrate knowledge of the reproductive system

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: Demonstrate knowledge of the senses

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: **Demonstrate knowledge of immunology**

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: Comply with medical law and ethics

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: Exhibit ethical behavior

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: Describe legal ramifications of misconduct

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: Practice discretion regarding patient information

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: Practice personal professional protocol with medical community

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: **Analyze factors that influence a patient's response to stress**

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: **Analyze physiological response to stress**

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: **Analyze psychological response to stress**

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: **Provide care for a patient with an ineffective coping response**

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: **Explain human growth and development**

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: **Demonstrate appropriate communication techniques**

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: Establish rapport

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: Use emergency procedures

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: Perform first aid

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: **Respond to medical emergencies**

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: Maintain medical records and laboratory reports

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: Prepare office communications

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: Use office equipment

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: Demonstrate knowledge of different payment systems

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: Perform diagnostic coding

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: Process insurance claims/forms

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: Perform financial functions

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Histology

Competency: Perform set-up and workflow functions

Competency Builders:

Activate equipment (e.g., embedding center, flotation bath and other automated equipment)
Perform quality control documentation on equipment and reagents (e.g., temperature; labeling; maintenance)
Set-up frozen section area (e.g., cryostat, stain set-up, supplies)
Set-up microtomy area with appropriate supplies (e.g., knife, slides, marker, ice)
Prepare tissue dissection area
Remove specimens from processors
Clean processors
Change and fill reagents on processors
Collect log/computer sheets and labels for specimens
Run a control hematoxylin and eosin (H&E) slide
Properly clean and supply laboratory glassware (e.g., acid-cleaned glassware for immuno, silver stains)
Prepare reagents, buffers, solutions, and stains as required
Maintain all laboratory areas
Check alcohol reagents using alcohol hydrometer to determine percentage of solutions
Check refrigerator for late specimens from previous day
Channel specimens to appropriate laboratory
Notify supervisor of needed supplies
Accumulate personal protective equipment for use
Transport tissue specimens to histology laboratory
Assist with specimen collection and handling
Package specimen for mailing/shipping
Read laboratory procedure manuals
Pick up special biopsy specimens (e.g., muscle, sural nerve, cardiac, renal) from appropriate personnel

Competency: Perform dissecting functions

Competency Builders:

Identify surgical/anatomical specimens
Evaluate surgical/anatomical specimens
Accession surgical/anatomical specimens
Set-up specimens to be examined and dictated by pathologists
Prepare specimens for fixation
Describe function and application of fixation
Section frozen sections for rapid diagnosis by pathologists
Demonstrate rapid hematoxylin and eosin staining
Decalcify bone specimens
Describe proper disinfecting of dissection area
Evaluate specimens for proper patient identification
Use universal precautions
Label tissue cassette with proper accession number

Competency: Perform proper embedding of specimens

Competency Builders:

Describe proper embedding procedures
Orient tissue properly with attention to ink markings, type of tissue, and correct size of mold
Embed tissue specimens
Clean and refill embedding center daily
Check accuracy of case numbers of all paraffin blocks on log sheet
Describe function and types of embedding media

Competency: Perform routine histology procedures

Competency Builders:

Perform routine H&E
Coverslip prepared microscopic slides properly
Label slides properly
Identify tissue structures and staining characteristics
Differentiate among well-prepared and poorly-prepared stained histologic specimens
Section a wide variety of embedded specimens using a microtome
Coverslip tissue section using mounting media
Distribute microscopic slides to pathologists for interpretation

Competency: Perform special stains

Competency Builders:

Stain appropriate control for each special stain
Label all reagents in regard to contents, concentration, date received/prepared, expiration date, storage requirements, precautions
Describe routine special stains (e.g., Acid Fast, Gram, Silver, PAS)
Identify pH properties of buffers and solutions
Demonstrate use of pH meter
Use microscope to evaluate proper staining accuracy
Perform immunoperoxidase procedures to identify antigens in tissue
Describe theory of immunoperoxidase procedures
Perform microwave techniques
Describe theory of microwaving procedures
Describe storage and disposal of corrosives and flammable chemicals
Describe basic chemistry of hematoxylin and eosin staining, special stains, decalcification, and immunoperoxidase
Identify hazard identification labels (e.g., acid, corrosive, biohazard, carcinogenic)
Describe proper handling of chemicals and specimens

Competency: Perform quality control and assurance functions

Competency Builders:

Practice quality control and assurance in the laboratory
Correct errors and their sources
Record information on tissue specimen record sheets
Print or type information on labels
Use control slides when performing staining procedures to ensure reliability and validity
Maintain quality control on all procedures and regents
Check equipment for proper operation and calibrate if necessary
Notify supervisor of malfunctioning equipment
Accession specimens using a logbook/computer to ensure correct identification
Log all procedures performed
Maintain quality control records of equipment and instruments
Differentiate among proper fixation, dehydration, and infiltration of specimens

Competency: Operate histology equipment

Competency Builders:

Use drying oven
Use tissue processor
Use embedding centers
Use microscope
Use microtome
Use water baths
Use Celsius and Fahrenheit thermometers
Use cryostat
Use coverslipper
Use pH meter
Use balance
Use freezer/refrigerator
Use stainers (routine and immuno)
Use paraffin baths
Use microwave oven
Use computer terminals
Use cassette labelers

Competency: Store materials safely

Competency Builders:

Label reagents, acids, and bases
Store reagents, acids, and bases
Store flammables
Store controlled substances
Use Material Safety Data Sheets (MSDS) properly

Competency: Perform record keeping functions

Competency Builders:

Maintain records of all discarded and saved specimens
Prepare gross specimens for maintenance in storage
Maintain records for gross specimens that require photography
Maintain accurate records of all procedures performed
Process reports, slides, and tissues
File surgical and autopsy blocks
File surgical and autopsy slides
Process billing functions via computer
Retrieve slides, reports, blocks, and/or tissue for consultation cases

Unit: Phlebotomy

Competency: Demonstrate knowledge of health care institutions and departments in which a phlebotomist functions

Competency Builders:

Identify the health care providers in hospitals and clinics
Describe the organizational structure of the clinical laboratory department
Discuss the roles of clinical laboratory personnel
Discuss the qualifications for clinical laboratory personnel
List the types of laboratory procedures run in the various sections of the clinical laboratory department
Describe the role of the clinical laboratory in assessing body functions

Competency: Identify the phlebotomist's role as a member of a health care team

Competency Builders:

Describe the various facilities and departments in which the phlebotomist interacts
Describe the major functions of the various facilities and departments in which the phlebotomist interacts

Competency: **Describe collection equipment, reagents, and interfering factors in blood collection**

Competency Builders:

Describe the types of patient specimens that are analyzed in the clinical laboratory
Describe the phlebotomist's role in collecting and transporting these specimens to the laboratory
List the supplies that should be carried on a phlebotomist's tray when collecting microspecimens
Describe substances that can interfere in clinical analysis of blood constituents
Describe procedures used to avoid interference in clinical analysis of blood constituents
List the types of equipment needed to perform a venipuncture
Explain the special precautions employed when collecting blood from a newborn infant
Explain the types of equipment needed to collect blood from a newborn infant
List the equipment needed to perform a heel stick collection on an infant

Competency: **Describe proper blood collection procedure, including handling complications that may arise**

Competency Builders:

Discuss the legal and ethical importance of proper patient/sample identification
Identify potential sites for venipuncture
Identify potential sites for capillary puncture
List what effects tourniquet, hand squeezing, and heating pads have on skin puncture
List what effects tourniquet, hand squeezing, and heating pads have on venipuncture
Establish a recollection policy
Identify criteria for rejection of a patient sample for testing
Describe why some sites are more difficult to draw blood from then others
Identify which sites are more difficult to draw blood from
Name frequent causes of phlebotomy complications
Explain frequent causes of phlebotomy complications

Competency: **Demonstrate knowledge of the disease process route of infection, infection control, and equipment safety**

Competency Builders:

Identify the potential routes of infection
Identify the methods for infection prevention
Perform protocol for obtaining a sterile site

Competency: **Explain the protocol for communication, transport, and processing specimens**

Competency Builders:

Explain the correct procedure for complying with the request for collection of routine specimens
Explain the correct procedure for complying with the request for collection of special specimens
Explain the rationale for the various methods of transport
Explain the procedure for processing specimens for routine testing from specimen labeling to result reporting manual or computer systems
Explain the reasons for processing procedures
Identify essential information that should be on the laboratory requisition or computer order entry
Describe the significance of time constraints for specimen delivery to the analytical area
Describe schedule constraints imposed by timed operational factors in the laboratory
Identify the precautions applicable to verbal test ordering and reporting
Evaluate results of quality control techniques in specimen collection
Implement corrective quality control techniques where indicate

Competency: **Apply quality control and safety procedures**

Competency Builders:

Describe a system for monitoring quality assurance in the collection of blood specimens
Identify policies and procedures used in the clinical laboratory to assure quality in the obtaining of blood specimens
Design a strategy to implement a quality assurance program in the specimen collection section of the clinical laboratory
Describe safety measures that should be followed at all times by the phlebotomist when collecting blood specimens
Evaluate the electrical, radiation, and fire safety procedures used in the phlebotomy clinical laboratory setting

Competency: **Describe basic concepts of communications, stress management, professional behavior, and the legal implications of the health-related work environment**

Competency Builders:

Describe the protocol for preparing a patient for laboratory testing
Describe the preferred techniques for dealing with family and visitors during the blood specimen collection
Explain intra-laboratory communications techniques
Explain inter-laboratory communications techniques

Emergency Medical Technician

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	**Page**
Employability Skills	EMT-3
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Emergency Medical Services	EMT-86

DON'T FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: Develop a career plan

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: Prepare for employment

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: Evaluate the importance of self-esteem as an employability skill

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: Project professional image

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: Achieve individual and professional goals

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: Manage personal finances

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: Manage stressful situations

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: Analyze effects of family on work and work on family

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: Apply lifelong learning skills

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: Manage professional development

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: Use teamwork to solve problems

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: Conduct team meetings

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: **Demonstrate proficiency in technical documentation**

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: **Demonstrate proficiency in technical report writing**

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: Comply with local, state, and federal regulations

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: **Maintain personal safety and hygiene**

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results, instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: **Demonstrate general knowledge of basic chemistry**

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: **Demonstrate general knowledge of the human body**

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: **Demonstrate knowledge of the circulatory/cardiovascular system**

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: **Demonstrate knowledge of the lymphatic system**

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: **Demonstrate knowledge of the urinary system**

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: **Demonstrate knowledge of the reproductive system**

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: **Demonstrate knowledge of the senses**

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: Demonstrate knowledge of immunology

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: Comply with medical law and ethics

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: Exhibit ethical behavior

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: Describe legal ramifications of misconduct

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: **Practice discretion regarding patient information**

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: **Practice personal professional protocol with medical community**

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: **Analyze factors that influence a patient's response to stress**

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: **Analyze physiological response to stress**

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: **Analyze psychological response to stress**

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: **Provide care for a patient with an ineffective coping response**

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: **Explain human growth and development**

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: **Demonstrate appropriate communication techniques**

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: Establish rapport

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: Use emergency procedures

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: Perform first aid

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: **Respond to medical emergencies**

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: Maintain medical records and laboratory reports

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: Prepare office communications

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: **Use office equipment**

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: **Demonstrate knowledge of different payment systems**

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: **Perform diagnostic coding**

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: **Process insurance claims/forms**

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: Perform financial functions

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Vital Signs

Competency: Interview patient

Competency Builders:

Complete patient information sheets
Record medical history (e.g., allergies, current medications)
Assess bio-psycho-social condition
Validate data with patient or patient's family member(s)

Competency: Measure temperature

Competency Builders:

Follow safety and aseptic precautions for taking temperature
Identify normal range and average temperature of oral, axillary, tympanic, and rectal methods of measuring body temperature
Identify factors that may affect temperature
Select route for measuring temperature
Demonstrate use of different types of thermometers
Record temperature measurements
Report abnormal temperature measurements
Maintain thermometer(s)

Competency: Measure pulse

Competency Builders:

Identify criteria for selecting pulse site (e.g., femoral, apical, radial)
Identify normal pulse range for different age groups
Identify factors that may affect pulse
Identify variations from normal pulse that should be reported
Record pulse

Competency: **Measure respiration**

Competency Builders:

Assess lung sounds
Measure rate, depth, and rhythm of respiration
Identify normal respiratory rate for different age groups
Report signs of compromised respiration
Identify factors that may affect respiration
Record respiration

Competency: **Measure blood pressure**

Competency Builders:

Identify myths and misconceptions related to blood pressure and hypertension
Identify etiology of hypertension
Identify consequences of untreated hypertension
Identify normal range of blood pressure for different age groups
Record blood pressure
Identify factors that affect blood pressure
Select appropriate cuff size
Describe the effect of inappropriate cuff size on accurate blood pressure reading
Identify variations from normal blood pressure that should be reported
Demonstrate use of aneroid sphygmomanometer gmomanometer
Demonstrate use of mercurial sphygmomanometer gmomanometer
Demonstrate palpated blood pressure

Competency: **Obtain physical measurements**

Competency Builders:

Measure adult height
Measure adult weight
Measure adult chest and waist expansion
Measure infant height
Measure infant weight
Measure infant head and chest circumference
Measure auditory status (e.g., tympanogram)
Measure visual status (e.g., eye chart)
Identify color blindness
Record all results

Unit: Nutrition

Competency: Identify fundamentals of nutrition

Competency Builders:

Identify nutrients and food groups
Explain role of nutrients to body functions
Explain regional, cultural, and religious food patterns
List factors which must be considered when purchasing food
Identify component of a balanced diet across the life span (e.g., USDA Food pyramid)
List factors which must be considered when storing food
Identify methods of food preparation
Instruct patient in sound nutrition principles

Competency: Identify nutritional needs related to special conditions and/or diseases

Competency Builders:

Describe common diets related to health alterations (e.g., pureed, mechanical-soft)
Describe special diets
Identify community resources
Identify risks of non-compliance with dietary restrictions
Educate patient regarding dietary hazards (e.g., caffeine, fats)

Competency: Draw correlation between diet and exercise

Competency Builders:

Identify methods of exercise
Explain effect of exercise and food on energy level
Write an exercise plan
Identify weight-related issues

Competency: **Identify facets of alternative nutrition**

Competency Builders:

Identify indications and effects of tube feedings
Identify indications and effects of intravenous fluids
Identify indications and effects of lipids
Identify indications and effects of hyperal

Unit: Basic Pharmacology

Competency: Maintain supply of medications

Competency Builders:

Check inventory stock
Contact supplier
Rotate stock
Process narcotic forms (i.e., Drug Enforcement Agency (DEA) license)
Store medications properly
Prepare expired medications for disposal
Dispose of medications properly (i.e., comply with government regulations)

Competency: Calculate dosage according to physician's orders

Competency Builders:

Verify accuracy of medical orders
Use Physician's Desk Reference (PDR)
Transcribe medication order
Calculate oral dosage
Calculate parenteral dosage
Calculate sublingual dosage
Calculate pediatric dosage
Calculate intravenous dosage and rate of flow

Competency: Instruct patients on use of medications

Competency Builders:

Provide verbal and/or written instructions for medication use
Explain use of medications (e.g., identify side effects, adverse effects, interactions)
Maintain standing orders according to physician's protocol (e.g., prescription refills)

Competency: Dispense medications according to medical orders

Competency Builders:

Identify patient
Verify patient allergies
Use reference materials
Verify accuracy of medical orders
Calculate dosages
Prepare oral medication
Identify correct anatomical sites
Prepare intramuscular, intradermal, and subcutaneous injectable medications
Prepare and administer sublingual medications
Prepare transdermal medications
Prepare inhalant medications
Prepare instillation medications
Prepare and administer topical medications
Prepare and administer rectal medications
Prepare and administer vaginal medications
Assist with administration of local anesthesia
Administer medications
Document medication administration
Document patient response to medications

Competency: Evaluate response to medication

Competency Builders:

Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medication

Unit: Examinations

Competency: **Demonstrate general knowledge of diagnostic studies**

Competency Builders:

Describe the various methods of examining patients
Explain the functions of commonly used examining instruments
Describe the sequence of steps in a general physical examination
Identify various patient positions used in examinations
Identify common diagnostic blood tests performed in the medical laboratory
Differentiate between cultures and smears used in bacteriology
Identify sources from which cultures and smears may be obtained
Describe common radiological and sonographic studies and imaging techniques
Identify the purposes of nuclear medicine
Identify common cardiopulmonary diagnostic examinations
Identify common neurological diagnostic examinations

Competency: **Demonstrate principles of body mechanics and ergonomics**

Competency Builders:

Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient
Assist patient in and out of wheelchair
Assist patient with crutches
Assist patient with cane
Assist patient with walker
Assist patient with standing
Assist patient with cast or splints
Assist patient to bathroom
Position patient using supportive devices (e.g., pillows, footboards)
Perform ROM (i.e., range of motion)

Competency: **Assist with general examination**

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Change paper on examination table
Provide for patient privacy
Prepare patient for examination
Communicate with patient with special needs (e.g., hearing or vision disorder)
Inventory personal property
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Competency: **Assist with eye, ear, nose, and throat examination**

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with and chart eye irrigation
Assist with and chart ear irrigation
Assist with and chart tympanometry
Assist with and chart laryngoscopy
Describe taste bud reactions
Conduct visual screening
Conduct auditory screening
Administer eye, ear, and nose medications
Clean examination room after procedure

Competency: Assist with obstetric and gynecological examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Obtain cytology history
Assist with Pap smear
Instruct patient in self breast examination
Clean examination room after procedure

Competency: Assist with pediatric examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Record measurements on growth chart
Record immunizations
Apply restraints when needed (e.g., papoose board)
Clean examination room after procedure

Competency: Assist with proctology and gastrology examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with proctoscopy
Clean examination room after procedure

Competency: Assist with orthopedic examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment (e.g., soaks)
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Assist with casting and splinting procedures
Demonstrate use of ambulatory aids
Assist patient in wheelchair transfer to and from examination table
Clean examination room after procedure

Competency: Assist with neurological examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Competency: Assist with geriatric examination

Competency Builders:

Prepare examination room(s)
Set-up trays and equipment
Prepare patient for examination
Assist physician with examination
Carry out physician's orders
Follow up patient needs
Ensure procedure documentation and labeling
Clean examination room after procedure

Unit: Laboratory Tests and Diagnostic Procedures

Competency: **Perform drug screen testing**

Competency Builders:

Demonstrate safe use of equipment
Record results accurately
Collect and label specimen accurately

Competency: **Perform tuberculosis testing**

Competency Builders:

Administer tine test
Administer Mantoux test
Interpret test results

Competency: **Perform specimen collection and handling**

Competency Builders:

Collect eye, nose, and throat specimens for culture
Collect urine (e.g., clean-catch, sterile, 24-hour, midstream, catheter)
Collect stool specimen
Demonstrate proper techniques to perform venipuncture and capillary puncture
Collect wound specimens
Collect sputum specimens
Collect capillary blood
Collect venous blood using syringe
Collect venous blood using vacutainer
Label all collected specimens properly
Package specimen for mailing/shipping
Transport specimen
Differentiate among timed specimens, fasting specimens, and state specimens
Describe general criteria for suitability of a specimen for analysis
Describe conditions that must be met if specimens and tests are to be used as legal evidence

Competency: Assist with allergy testing

Competency Builders:

Prepare tray
Perform scratch test (e.g., ID test)
Perform patch test
Perform intradermal test

Competency: Perform manual and automated tests of complete blood count

Competency Builders:

Perform hematocrit (Hct)
Perform hemoglobin determination (hgB)
Perform red blood cell counts (RBC)
Perform white blood cell counts (WBC)
Perform white blood cell differential (diff)
Perform erythrocyte sedimentation rate (ESR)
Perform prothrombin time (PT)

Competency: Perform serological tests

Competency Builders:

Prepare serum
Perform serum blood chemistries
Separate plasma or serum from cells
Perform ABO and Rh typing
Perform monospot test
Perform serum pregnancy test (HCG)
Package record data and set-up delivery of blood samples

Competency: Perform electrocardiograms

Competency Builders:

Mount a 12-lead electrocardiogram
Run and record a standard
Set-up Holtor monitors
Clean electrocardiogram equipment

Competency: Perform diagnostic skills

Competency Builders:

Perform neurological checks
Perform urinary tests (e.g., sugar and acetone, protein, ketones, specific gravity)
Assist with laboratory tests (e.g., blood gases, lumbar puncture)
Measure blood glucose level
Maintain monitoring equipment (e.g., cardiac monitor, pulse oximeter)
Measure central venous pressure (CVP)
Perform electrocardiogram (ECG)
Perform visual screening
Perform auditory screening

Competency: Demonstrate laboratory procedures in clinical chemistry

Competency Builders:

List requirements for patient preparation
Describe special collection techniques (e.g., 24 hr. urine G)
Handle specimen properly
Correlate test procedure to methodology
Identify normal versus panic values
Identify clinical significant

Competency: **Demonstrate laboratory procedures in hematology/coagulation**

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal versus panic values
Identify clinical significance of test value

Competency: **Demonstrate laboratory procedures in immunohematology**

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal versus panic values
Identify clinical significance of test value

Competency: **Demonstrate laboratory procedures in microbiology**

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal verses panic values
Identify clinical significance of test value

Competency: Demonstrate laboratory procedures in immunology

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal verses panic values
Identify clinical significance of test value

Competency: Demonstrate laboratory procedures in urinalysis

Competency Builders:

List requirements for patient preparation
Handle specimen properly
Correlate test procedure to methodology
Identify normal verses panic values
Identify clinical significance of test value

Competency: Demonstrate safe phlebotomy techniques

Competency Builders:

Assemble equipment (e.g., vacutainers, bottles)
Differentiate venous versus arterial collection procedures (e.g., Allen test)
Prepare patient for procedure (e.g., establish rapport)
Care for phlebotomy site
Collect capillary blood
Collect venous blood with syringe
Collect venous blood with vacutainer
Collect blood culture
Handle specimen(s) properly

Competency: **Administer laboratory management skills**

Competency Builders:

Describe different management styles
Explain personnel evaluation process
Apply accounting principles
Analyze statistical data
Schedule personnel equitably
Negotiate contracts
Identify regulatory agencies (e.g., OSHA, CAP, JCAHO, AABB)
Explain Clinical Laboratory Improvement Amendment

Unit: Phlebotomy

Competency: **Demonstrate knowledge of health care institutions and departments in which a phlebotomist functions**

Competency Builders:

Identify the health care providers in hospitals and clinics
Describe the organizational structure of the clinical laboratory department
Discuss the roles of clinical laboratory personnel
Discuss the qualifications for clinical laboratory personnel
List the types of laboratory procedures run in the various sections of the clinical laboratory department
Describe the role of the clinical laboratory in assessing body functions

Competency: **Identify the phlebotomist's role as a member of a health care team**

Competency Builders:

Describe the various facilities and departments in which the phlebotomist interacts
Describe the major functions of the various facilities and departments in which the phlebotomist interacts

Competency: **Describe collection equipment, reagents, and interfering factors in blood collection**

Competency Builders:

Describe the types of patient specimens that are analyzed in the clinical laboratory
Describe the phlebotomist's role in collecting and transporting these specimens to the laboratory
List the supplies that should be carried on a phlebotomist's tray when collecting microspecimens
Describe substances that can interfere in clinical analysis of blood constituents
Describe procedures used to avoid interference in clinical analysis of blood constituents
List the types of equipment needed to perform a venipuncture
Explain the special precautions employed when collecting blood from a newborn infant
Explain the types of equipment needed to collect blood from a newborn infant
List the equipment needed to perform a heel stick collection on an infant

Competency: **Describe proper blood collection procedure, including handling complications that may arise**

Competency Builders:

Discuss the legal and ethical importance of proper patient/sample identification
Identify potential sites for venipuncture
Identify potential sites for capillary puncture
List what effects tourniquet, hand squeezing, and heating pads have on skin puncture
List what effects tourniquet, hand squeezing, and heating pads have on venipuncture
Establish a recollection policy
Identify criteria for rejection of a patient sample for testing
Describe why some sites are more difficult to draw blood from then others
Identify which sites are more difficult to draw blood from
Name frequent causes of phlebotomy complications
Explain frequent causes of phlebotomy complications

Competency: **Demonstrate knowledge of the disease process route of infection, infection control, and equipment safety**

Competency Builders:

Identify the potential routes of infection
Identify the methods for infection prevention
Perform protocol for obtaining a sterile site

Competency: **Explain the protocol for communication, transport, and processing specimens**

Competency Builders:

Explain the correct procedure for complying with the request for collection of routine specimens
Explain the correct procedure for complying with the request for collection of special specimens
Explain the rationale for the various methods of transport
Explain the procedure for processing specimens for routine testing from specimen labeling to result reporting manual or computer systems
Explain the reasons for processing procedures
Identify essential information that should be on the laboratory requisition or computer order entry
Describe the significance of time constraints for specimen delivery to the analytical area
Describe schedule constraints imposed by timed operational factors in the laboratory
Identify the precautions applicable to verbal test ordering and reporting
Evaluate results of quality control techniques in specimen collection
Implement corrective quality control techniques where indicate

Competency: **Apply quality control and safety procedures**

Competency Builders:

Describe a system for monitoring quality assurance in the collection of blood specimens
Identify policies and procedures used in the clinical laboratory to assure quality in the obtaining of blood specimens
Design a strategy to implement a quality assurance program in the specimen collection section of the clinical laboratory
Describe safety measures that should be followed at all times by the phlebotomist when collecting blood specimens
Evaluate the electrical, radiation, and fire safety procedures used in the phlebotomy clinical laboratory setting

Competency: **Describe basic concepts of communications, stress management, professional behavior, and the legal implications of the health-related work environment**

Competency Builders:

Describe the protocol for preparing a patient for laboratory testing
Describe the preferred techniques for dealing with family and visitors during the blood specimen collection
Explain intra-laboratory communications techniques
Explain inter-laboratory communications techniques

Unit: First Responder

Competency: Describe roles and responsibilities of the First Responder

Competency Builders:

Describe the role of First Responder as a member of the EMS Team
Describe the responsibilities of the First Responder for the provision of prehospital emergency care within the local EMS system

Competency: Demonstrate knowledge of medicolegal aspects

Competency Builders:

Describe the medicolegal aspects of a First Responder's provision of emergency medical care in the jurisdiction having authority, including duty to act, standard of care, consent to care, forcible restraint, abandonment, documentation and applicable Good Samaritan Laws
Practice within medicolegal standards
Differentiate between First Responders and EMT-Paramedics

Competency: Assess vital signs of a sick or injured person

Competency Builders:

Define signs versus symptoms
Identify "normal" ranges for blood pressure, temperature, pulse, and respiration
Take TPR accurately
Take blood pressure accurately
Determine skin color, temperature, and moistness
Determine the level of consciousness of the sick or injured person
Record vital signs accurately

Competency: **Use medical identification devices**

Competency Builders:

Identify the most commonly used medical identification devices
Apply the information contained on or in the medical identification devices to patient assessment and patient care procedures
Accurately report and record information obtained from medical identification devices

Competency: **Conduct a primary assessment of problems that threaten life if not corrected immediately**

Competency Builders:

Identify importance of A-B-Cs of primary survey
Assess for inadequate airway, respirations, circulation, and profuse bleeding
Describe when immediate correction is necessary
Use spinal precautions as appropriate

Competency: **Demonstrate BLS/CPR procedures**

Competency Builders:

Establish open airway
Maintain open airway
Demonstrate rescue breathing and artificial circulation by means of CPR
Demonstrate use of barrier devices
Describe parameters for CPR in adult, pediatric, and infant victims

Competency: Control bleeding

Competency Builders:

Identify items that can be used to control external bleeding and minimize the contamination of open wounds
Identify five means of bleeding control
Apply pressure dressings that will control bleeding and minimize the contamination of open wounds
Control external bleeding by means of direct pressure and elevation
Control external bleeding by means of pressure applied to the pressure points of the main supplying arteries
Identify the likelihood of internal bleeding
Care for patient who exhibits the signs and symptoms of internal bleeding

Competency: Identify early signs and symptoms of shock

Competency Builders:

Describe the circumstances under which shock may occur or be present
Define anti-shock measures
Provide anti-shock measures as a part of routine patient care

Competency: **Use mechanical aids for securing an airway and assisting ventilation/oxygenation**

Competency Builders:

Use available mechanical devices to assure the maintenance of an open airway
Use available mechanical devices to assist ventilation
Use available oxygen delivery equipment
Use available suction equipment

Competency: **Provide secondary assessment**

Competency Builders:

Conduct a methodical head-to-toe physical examination to discover conditions not found during the primary assessment
Interview the sick or injured person to obtain facts relevant to the person's condition
Interview coworkers, witnesses, family members, or other individuals to obtain facts relevant to the sick or injured person's condition

Competency: **Differentiate between a medical emergency and trauma situation**

Competency Builders:

Identify signs/symptoms of a non-traumatic medical emergency
Identify signs/symptoms of traumatic injury
Describe appropriate care for the injury or illness identified

Competency: Care for patient in medical emergency

Competency Builders:

Describe patient experiencing cardiovascular emergency
Care for patient experiencing cardiovascular emergency
Describe patient experiencing respiratory emergency
Care for patient experiencing respiratory emergency
Describe patient experiencing behavioral/neurological disorder
Care for patient experiencing behavioral/neurological disorder
Describe patient experiencing diabetic emergency
Care for patient experiencing diabetic emergency
Describe patient experiencing metabolically induced shock
Care for patient experiencing metabolically induced shock

Competency: Care for patient with traumatic injury

Competency Builders:

Explain need for continuous reassessment
Explain mechanism of injury
Describe patient experiencing c-spine/back injury
Care for patient experiencing c-spine/back injury
Describe patient experiencing head injury
Care for patient experiencing head injury
Describe patient experiencing musculo-skeletal injuries
Care for patient experiencing musculo-skeletal injuries
Describe patient experiencing trauma-related shock
Care for patient experiencing trauma-related shock
Describe patient experiencing amputation(s)
Care for patient experiencing amputation(s)
Describe patient experiencing multi-systems trauma
Care for patient experiencing multi-systems trauma
Describe patient experiencing blunt trauma
Care for patient experiencing blunt trauma
Describe patient experiencing occular trauma
Care for patient experiencing occular trauma
Describe patient experiencing trauma-induced neurological injury
Care for patient experiencing trauma-induced neurological injury
Document injury, assessment, and care

Competency: Identify musculo-skeletal injuries

Competency Builders:

Identify various types of musculo-skeletal injuries
Immobilize and care for suspected fractures, dislocation, sprains, and strains with available supplies and equipment, including commercially available and improvised devices

Competency: Identify potential for spinal injury

Competency Builders:

Describe the likelihood for spinal injury based patient assessment and a mechanism of injury
Explain manual c-spine stabilization
Explain how to immobilize a person who has a suspected spinal injury
Describe techniques used in assessing/treating spinal injury patients
Identify special equipment needed in treating and packaging a suspected spinal-injured patient

Competency: **Describe emergency evacuation and transfer of a sick or injured person from an unsafe environment/ location**

Competency Builders:

Describe situations when a person should be evacuated or transferred
Assist, drag, or carry a sick or injured person from a dangerous location to a safe place
Maintain safety precautions during evacuation and transfer
Explain importance of thorough assessment procedures after patient has been moved to a safe area
Explain importance of accurate documentation of emergency evacuation of patient

Competency: **Care for various patient needs**

Competency Builders:

Describe a patient experiencing non-traumatic chest pain
Care for a patient experiencing non-traumatic chest pain
Describe a patient experiencing respiratory distress
Care for a patient experiencing respiratory distress
Describe a patient experiencing a seizure
Care for a patient experiencing a seizure
Describe a patient in an altered state of consciousness
Care for a patient in an altered state of consciousness

Competency: **Care for patient who has ingested a poisonous substance**

Competency Builders:

Identify poisoning as the possible cause of a patient's medical emergency
Call poison control
Care for a patient who has ingested a poisonous substance
Care for a patient who has inhaled a poisonous substance
Care for a patient who has absorbed a poisonous substance
Care for a patient who has been injected with a poisonous substance
Call poison control
Describe the importance of removing patient from the source/environment
Identify safety precautions for bystanders and rescuers
Call poison control

Competency: **Care for patient who is burned**

Competency Builders:

Describe the severity of burns including degree, body surface area, type, and location
Care for a patient who has thermal burns
Care for a patient who has chemical burns
Care for a patient who has electrical burns
Identify special circumstances involving burns (e.g., respiratory, eyes)
Identify possible secondary injuries complicating or associated with burns
Describe appropriate care for possible secondary injuries complicating or associated with burns

Competency: **Care for patient suffering from an environmental emergency**

Competency Builders:

Explain how exposure to heat or cold can result in a medical emergency
Identify signs/symptoms environmental emergencies due to excessive temperatures
Care for a patient who is experiencing heat cramps
Care for a patient who is experiencing heat exhaustion
Care for a patient who is experiencing heat stroke
Care for a patient who is experiencing frostbite
Care for a patient who is experiencing hypothermia

Competency: **Care for patients with special needs**

Competency Builders:

Describe patients with special needs
Care for ill or injured pediatric patients
Care for ill or injured elderly patients
Care for ill or injured physically disabled patients
Care for ill or injured developmentally disabled patients
Care for ill or injured mentally disabled patients
Care for ill or injured grossly obese patients

Competency: **Provide triage to victims of multiple casualty incidents**

Competency Builders:

Identify difference between multiple and mass casualty situations
Categorize victims of multiple casualty incidents according to severity level of injury or illness
Use triage tags or other identification devices to indicate priorities for prehospital emergency care and transportation to medical facilities
Work as a team member to perform triage at locations of multiple casualty incidents
Work as a team member to perform patient assessments for multiple casualty incidents
Work as a team member to carry out patient care procedures at locations of multiple casualty incidents
Prioritize different levels of multiple casualty incidents
Describe the importance of critical incident stress debriefing following multiple casualty incidents

Competency: **Differentiate between life-threatening and non life-threatening entrapment situations**

Competency Builders:

Take steps to minimize the chance of injury or death to all involved when confronted with a potentially life-threatening entrapment situation
Identify entrapment situations
Undertake hazard control measures consistent with and available equipment
Use available equipment to gain access to persons who are entrapped
Use available equipment to disentangle persons from mechanisms of entrapment

Competency: **Assist with emergency childbirth**

Competency Builders:

Evaluate whether delivery is imminent
Assist with emergency delivery
Care for mother and baby following normal childbirth
Describe abnormal childbirth situations
Care for mother and baby following abnormal childbirth

Unit: Emergency Medical Technology

Competency: **Describe roles and responsibilities of the Emergency Medical Technician (EMT)**

Competency Builders:

Identify the roles and responsibilities of the EMT
Describe the importance of emergency care
Identify legal aspects of emergency care
Identify contributing agencies in local EMS system
List six areas of personal attitude and conduct expected of an EMT
Describe state requirements for EMT certification and recertification
Explain the EMT's role in the organ donation program
Describe the signs and symptoms of critical incident stress
Explain the need for critical incident stress debriefing

Competency: **Apply Center for Disease Control (CDC) guidelines**

Competency Builders:

Identify ways communicable diseases can be transmitted
Demonstrate knowledge of CDC guidelines
Practice universal precautions
Describe procedures for reporting and follow-up after exposure to a communicable disease
Describe methods used to disinfect equipment and vehicles involved with an infectious patient

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary
Demonstrate use of sterilized equipment

Competency: Conduct patient assessment for illness/injuries

Competency Builders:

Assess pulse, blood pressure, respiration, and temperature (to include rate, rhythm, quality)
Assess level of consciousness
Assess pupil size and reaction
Assess skin color and temperature
Assess motor neurological status
Assess reaction to pain
Perform an examination for life threatening problems (i.e., primary/secondary survey)
Describe signs and symptoms of patient
Describe the etiology of the patient's condition
List five diagnostic signs in addition to the vital signs
Demonstrate technique for completing a total patient assessment, recording diagnostic signs and their normal states
Assess a trauma victim
Communicate (in proper sequence) patient assessment information
Record (in proper sequence) patient assessment information

Competency: Treat airway obstruction and respiratory arrest

Competency Builders:

Describe the basic mechanics of respiration
Maintain an open airway using nasal oropharyngeal equipment
Clear an obstructed airway
Provide appropriate oxygen therapy and ventilatory assistance
Perform mechanical suctioning of airway
Describe the significance of oxygen to body tissues, particularly the brain
List five components of the respiratory system and the functions of each
List three signs of adequate air exchange
Describe proper usage of oxygen therapy
Demonstrate safe handling of oxygen equipment

Competency: Treat cardiac arrest

Competency Builders:

Describe the basic mechanics of circulation
List signs of cardiac arrest
Perform CPR on adults, children, and infants
List three possible complications of CPR
List three instances when CPR may be terminated
Describe adjunctive equipment used in administration of CRP
Identify importance of continuing CPR during movement, extrication, and transport of cardiac arrest patient

Competency: Treat bleeding and shock

Competency Builders:

Identify the types and signs of external and internal bleeding
Control bleeding
Identify the types and signs of shock
Treat shock
Use pneumatic counter pressure devices appropriately

Competency: **Treat soft tissue injuries**

Competency Builders:

Describe the anatomy and physiology of the skin
Identify types, signs, and significance of various wounds
Provide basic wound care
Apply dressings and bandages to wounds
Describe how to care for a patient with an amputation and the care of the amputated part
List etiology of soft tissue injuries and potential complications of each
Describe importance of using aseptic technique in treating soft tissue injuries

Competency: **Treat musculo-skeletal injuries**

Competency Builders:

Describe the anatomy and physiology of the musculo-skeletal system
Identify types, signs, and symptoms of fractures, sprains, and dislocations
Select appropriate splint for treatment of presenting injury
Demonstrate techniques for immobilizing all fractures and dislocations
Identify mechanism of injury

Competency: **Treat injuries of the head, neck, face, eye, and spine**

Competency Builders:

Describe the anatomy and physiology of the antonomic, central, and peripheral nervous system
List signs and symptoms of brain and spinal injuries
Demonstrate care of patients with injuries to skull, face, eye, and neck
Demonstrate care of patients with injuries to the brain and spinal cord
Demonstrate spinal immobilization techniques
Describe assessment(s) of motor, sensory, and perfusion of the extremities before and after assessment, extrication, and transfer
Describe position of the patient after sustaining injuries

Competency: Treat injuries to the chest, abdomen, and genitalia

Competency Builders:

Describe the anatomy and physiology of the abdomen, chest, and genitourinary system
Identify types, signs, and symptoms of injuries to the chest, abdomen, and genitalia
Demonstrate care of patients with injuries to the chest, abdomen, and genitalia
Demonstrate techniques of dressing and bandaging the chest, abdomen, and genitalia

Competency: Treat medical emergencies

Competency Builders:

List methods in which poisons can enter the body
Explain how to contact the appropriate poison control center
Describe the signs, symptoms, and treatments for poison overdose victims
Describe the signs, symptoms, and treatments for victims of venomous bites and stings
Describe the signs, symptoms, and treatments for victims of heart and respiratory diseases
Describe the signs, symptoms, and treatments for victims of cerebro-vascular incidents
Describe the signs, symptoms, and treatments for diabetic patients
Describe the signs, symptoms, and treatments for patients with communicable diseases
Describe the signs, symptoms, and treatments of allergic reactions
Describe the signs, symptoms, and treatments for patients having seizures
Describe the signs, symptoms, and treatments for patients suffering from acute abdominal problems
Describe the signs, symptoms, and treatments for substance abuse patients

Competency: **Assist with emergency childbirth**

Competency Builders:

Describe the anatomy and physiology relevant to childbirth
Assist mother before, during, and after delivery
Describe potential complications during three stages of childbirth
Manage complications of delivery during three stages of childbirth
Care for neonate
Resuscitate newborn if necessary
Provide appropriate care for premature infant
Provide care for multiple births
Document data relevant to delivery and care given

Competency: **Demonstrate care for the pediatric patient**

Competency Builders:

Assess the pediatric patient
Initiate appropriate age-level treatment
Describe signs, symptoms, and treatment for croup/epiglottitis
Identify normal vital signs in children
Explain management of fevers in children
Describe signs of child abuse
Report signs of child abuse

Competency: **Treat burns**

Competency Builders:

Describe dangers of burns to patient and rescuer
Estimate the degree and size of a burn
Provide emergency care to the burned victim
Manage complications of burns (i.e., respiratory compromise)
Report degree and size of burns, along with any complications and care given

Competency: Treat environmental emergencies

Competency Builders:

Describe signs, symptoms, and treatment for patients suffering from heat cramps, heat exhaustion, heat stroke, hypothermia, and frostbite
Describe signs, symptoms, and treatment for patients exposed to water-related emergencies

Competency: Manage victims of hazardous materials incidents

Competency Builders:

Describe methods used to identify hazardous material
Describe the threats of hazardous material to victims and the EMT
Describe general principles used to manage a hazardous material victim
Describe methods used to decontaminate or isolate equipment or vehicles used in a hazardous material incident
Identify agencies responsible for handling hazardous material incidents
Describe scene safety

Competency: Manage special care situations

Competency Builders:

Provide care for the needs of geriatric, mentally/physically challenged, non-English speaking, and psychologically disturbed patients
Manage behavioral emergencies including disruptive patients
Manage sexual assault victims
Provide care for the terminally ill
Manage SIDS incidents
Describe aspects of scene safety

Competency: Demonstrate extrication

Competency Builders:

Describe common extrication tools, equipment, and safe handling
Demonstrate methods used to gain access to and extricate patient from entrapment, including a motor vehicle

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IVs, catheters, oxygen tubing)
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
identify safety needs of medicated patient
Demonstrate use of cot and immobilization equipment (e.g., side rails, cot straps, shoulder harness, child restraint seats, backboard straps, KED, collars)
Identify placement of patient call devices/emergency alert devices
Orient patient to surroundings
Identify techniques/procedures to patient

Competency: Describe mass casualty incidents

Competency Builders:

Define a mass casualty incident (MCI)
Describe the principles involved in management of an MCI
Explain the principle of triage
Describe treatment rationale for MCI

Competency: Demonstrate knowledge of systems operation

Competency Builders:

Identify regulations and recommendations related to driving an emergency vehicle
Describe emergency vehicle and equipment maintenance
Describe the non-medical role of the EMT in situations such as traffic accidents and crime scenes

Unit: Emergency Medical Services

Competency: Demonstrate knowledge of the paramedic profession

Competency Builders:

Define the roles and responsibilities of the paramedic
Differentiate among the various levels of training—from EMT to paramedic
List current state requirements for paramedic certification and recertification
Define continuing education, certification, licensure, and registration
Explain the purposes of a national association, national registry, and professional journals
Describe the benefits of paramedics teaching in their community

Competency: Describe emergency medical services (EMS) systems

Competency Builders:

Define medical control and physician responsibility
Explain pre-hospital stabilization of patients
Differentiate between management of trauma and medical patients
Describe protocols and their development
Explain the relationship between prehospital care and total patient care, including the emergency department and hospital specialty departments
Describe the continuum of patient care and the responsibilities of the paramedic within the transfer of patient responsibility
Describe the response of the EMS system, including system access, dispatcher responsibilities, patient evaluation, medical command, and patient responsibility
Identify groups such as ASTM, NCSEMSTC, ACS, AMAJRC, and USDOT and their roles in the promulgation of national standards
Outline the various paramedic-physician relationships
Describe retrospective evaluation of patient care including report review, continuing education, skill practice, and skill deterioration
Describe the EMT-Paramedic's initial responsibilities when arriving on the scene
Identify circumstances that require the EMT- Paramedic's to report incidents to law enforcement or other appropriate authorities

Competency: Demonstrate EMS communication systems

Competency Builders:

Describe the phases of communication necessary for an EMS event
Define essential communication terms and equipment
Describe the advantages and disadvantages of various EMS communication systems
Describe factors affecting interference, range, and clarity of base, vehicle, and portable radio communications
Describe the functions and responsibilities of the FCC
Describe the functions and responsibilities of the EMS dispatcher
Describe methods of verbal communication of patient information to hospital and to the physician
Explain the importance of written medical protocols and the written EMS run report
Demonstrate proper use of portable and mobile transmitter/receivers in a patient situation
Explain uses of biotelemetry equipment
Complete a written EMS report
Describe medical legal issues concerning patient information

Competency: Demonstrate rescue techniques and extrication

Competency Builders:

Identify possible hazards of a rescue scene
Describe procedures for handling hazards at a rescue scene
Describe the equipment and techniques to use to gain access to, package, extricate, and transport patients trapped within a vehicle or other confinement
Describe the integration of patient care into the process of patient disentanglement and rescue
Identify proper response in the presence of hazardous materials
Name proper authorities to notify in the case of hazardous materials
Manage scene and safe patient access
Explain removal and transport of the patient from the scene
Demonstrate procedures and operation of equipment used to gain access to, package, extricate, and transport patients trapped or confined in a vehicle or other type of entrapment
Demonstrate techniques for lifting and handling patients with and without spine injuries and/or other special injury problems utilizing the special equipment found on a rescue vehicle
Demonstrate techniques for lifting and moving patients utilizing typical patient handling/carrying devices

Competency: Describe major incident response

Competency Builders:

Define mass casualty incident (MCI) and when it should be declared
Describe the preplanning phase and response planning for MCI
Describe MCI communications
Describe the components of special resources
Describe the function of scene command, scene triage, and the transferring command function
Describe scene and staging management and a system for patient identification
Define scene safety

Competency: **Demonstrate knowledge of patient assessment and initial management**

Competency Builders:

Describe the primary and secondary survey
Describe the anatomy, physiology and pathophysiology of the airway and lungs and its anatomical structures
Describe the use of adjuncts in airway management
Describe advanced methods of airway management
Explain the significance of protection of the cervical spine in airway management
Explain pulmonary ventilation and gas exchange across the alveolar-capillary membrane
Describe the pathophysiology of open and closed pulmonary injuries
Describe the techniques for evaluating effectiveness of ventilation
Describe the anatomy and physiology of the heart and cardiovascular system
Describe the pathophysiology of cardiac arrest
Describe the mechanisms of evaluating the effectiveness of perfusion
Describe hemorrhage control and its benefits and complications
Assess neurological status
Explain the pathophysiology of shock
Define trauma score and its usefulness
Obtain a relevant patient medical history
Describe how a patient is packaged and stabilized for transportation to the hospital
Describe procedures for hospital selection, transportation, and patient monitoring enroute to the hospital
Perform a rapid assessment
Set priorities of care based on threat to life
Perform a secondary survey
Document general patient findings and treatment

Competency: Manage airway and ventilation

Competency Builders:

Describe techniques of advanced airway management, including intubation and surgical procedures
Demonstrate methods of airway management on adult, child, and infant manikins both manually and with adjunctive equipment
Demonstrate methods for assessing continued adequacy of airway management and ventilation when using advanced airway devices
Demonstrate use of portable and fixed suction devices for oropharyngeal and tracheal suctioning

Competency: Manage shock

Competency Builders:

Describe the causes, pathophysiology signs, symptoms, clinical manifestations, and management of shock
Describe fluids, fluid transport, and fluid and electrolyte imbalances
Describe resuscitation of the shock patient
Describe hemodynamics of the cardiovascular system
Describe differences in IV fluid composition and their implications in fluid administration
Describe baroreceptors and their affect on blood pressure and perfusion
Describe compensated and uncompensated shock
Describe evaluation of patient's perfusion status
Define acid-base balance
Describe indications and contraindications of the pneumatic anti-shock garment
Describe methods of fluid replacement and the advantages and disadvantages of each
Demonstrate the steps in shock resuscitation
Demonstrate use of pneumatic anti-shock garment
Demonstrate proper technique for setting up intravenous fluids for administration
Demonstrate proper technique of peripheral and external jugular venous cannulation on the adult, child, and infant patient
Demonstrate proper techniques for troubleshooting an intravenous infusion
Calculate fluid administration rates for intravenous fluids utilizing a variety of administration sets
Demonstrate aseptic IV techniques

Competency: **Demonstrate knowledge of pharmacology**

Competency Builders:

Identify the various origins and forms of drugs
Differentiate many various names of a drug (e.g., generic, trade, official, chemical)
Identify agencies responsible for regulating drugs and the rationale for regulation
Demonstrate use of the Physician's Desk Reference (PDR)
Identify local and systemic effects of drugs
List effects of various factors on the action of drugs
Describe methods of drug absorption
Define relevant pharmacology terms
Describe the apothecary and metric systems
Convert between and within the apothecary and metric systems
Describe the routes of administration of various types of drugs
Calculate fractional drug dosages
Identify the advantages and disadvantages of subcutaneous, intramuscular, intravenous, and transtracheal injections
Demonstrate the proper procedure for intramuscular, subcutaneous, intravenous piggyback, intravenous colus, and transtracheal medication administration
Demonstrate the proper procedure for withdrawing medication from a glass vial and a glass ampule

Competency: **Manage trauma emergencies**

Competency Builders:

Describe the general care and transportation of the trauma patient
Describe the priorities of trauma care and triage with multiple patients
Describe the anatomy, physiology, pathophysiology, assessment, and management of trauma to all regions of the human body
Describe methods of hemorrhage control
Demonstrate methods of hemorrhage control
Describe neurological examination, assessment, pathophysiology, and management
Describe rapid on-scene management of the trauma patient
Describe the components of a complete prehospital history and the significance of each
Describe various types of splints used for immobilization of fractures and dislocations and their advantages and disadvantages
Describe the short and long backboard, the various state-of-the-art substitutes available, and their specific uses
Describe various systems designed for scoring the severity of injuries to the trauma patient
Describe the use of a trauma score in quantifying patient condition
Demonstrate advanced methods of airway management and ventilation in the trauma patient
Demonstrate decompression of a tension pneumothorax
Demonstrate application of pneumatic anti-shock garment (MAST)
Demonstrate physical examination of the trauma patient
Demonstrate a neurological examination as performed on a trauma patient
Demonstrate immobilization of the cervical spine
Demonstrate splinting techniques
Define indications of a tension pneumothorax

Competency: Manage burn injuries

Competency Builders:

Describe the anatomy, physiology, pathophysiology, and assessment of the integumentary system
Describe the movement of body fluids between plasma, interstitial compartments and intracellular compartments
Describe the assessment and management of the burn system
Describe the pathophysiology and treatment of burn shock
Describe the major causes, classifications, and categories of burns
Describe the method of calculating percentages of body surface area burned and various formulas for calculating fluid resuscitation
Assess an inhalation injury

Competency: Manage respiratory emergencies

Competency Builders:

Describe the anatomy, physiology, pathophysiology, and assessment of the respiratory system
Define appropriate medical terms
Identify the normal partial pressures of oxygen and carbon dioxide in the alveoli, arterial and venous blood, and factors that affect those levels
Describe the normal and COPD respiratory drives
Identify the pharmacology, actions, indications, precautions, dosages, contraindications, and side effects of typical respiratory drugs for the adult and pediatric patient
Demonstrate methods of respiratory drug administration
Describe the signs, symptoms, and pathophysiology of conditions affecting the respiratory system
Demonstrate inspection, auscultation, and palpation of the thorax
Identify normal and abnormal lung sounds
Obtain a history from a patient with respiratory complaints
Assess a patient with respiratory problems

Competency: Manage cardiovascular emergencies

Competency Builders:

Describe the anatomy, physiology, and pathophysiology relevant to cardiovascular disease and emergencies
Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects of common emergency cardiovascular drugs
Identify complications of intracardiac injections
Describe innervation of the heart, sympathetic, and parasympathetic stimulation, blockade, an effects on the heart rate
Describe myocardial electrical physiology
Describe signs, symptoms, and common chief complaints of patients with cardiac conditions
Describe the historical information, specific observations, and physical findings to be evaluated in the cardiac patient
Identify actions, uses, and side effects of common prescription drugs relative to cardiac problems
Describe the etiology of cardiac arrest in adults and pediatric patients
Describe concepts of ECG monitoring, types and causes of artifacts, and rhythm analysis format
Identify the wave forms, intervals, and normal values relative to an electrocardiogram (ECG)
Describe the 12-lead ECG as compared to continuous monitoring
Describe the etiology, clinical significance, and ECG characteristics of cardiac dysrhythmias
Describe the indications for use of a precordial thump, vagotonic maneuvers, synchronized cardioversion, and defibrillation
List energy recommendations for adult and pediatric patients
Identify wave forms, artifacts, and dysrhythmias on Lead or MCL1 rhythm strips and oscilloscope
Obtain history from patient with cardiac condition
Assess dysrhythmias or cardiac condition
Demonstrate application of ECG electrodes
Obtain a sample Lead II or MCL1 rhythm strip
Use defibrillator paddles for Lead II monitoring
Troubleshoot a poor ECG rhythm
Perform a precoridal thump, vagotonic maneuvers, synchronized cardioversion, defibrillation, and external cardiac pacing
Use a mechanical CPR device
Explain a team approach when managing cardiac arrest

Competency: **Manage endocrine emergencies**

Competency Builders:

Describe the anatomy, physiology, and pathophysiology of the endocrine system
Describe the assessment and management of endocrine emergencies
Identify the historical information, observations, and physical findings significant in the patient with endocrine disorders
Identify common prescription drugs that endocrine patients might take and the implications of each
Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects of relevant drugs
Obtain a history from a patient with endocrine problems
Assess patients with endocrine problems
Administer relevant drugs

Competency: **Manage neurological emergencies**

Competency Builders:

Describe the anatomy, physiology, and pathophysiology of the neurological system
Describe the assessment and management of neurological disorders
Identify the actions, uses, and side effects of common prescription drugs relative to neurological problems
Identify common prescription drugs that a patient with neurological problems might take and the implications of each
Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects of relevant drugs
Explain the Glasgow Coma Scale
Use the Glasgow Coma Scale
Differentiate various types of seizures and their phases
Obtain history from a patient with neurological disorders
Assess patients with neurological disorders

Competency: **Manage digestive, genitourinary, and reproductive emergencies**

Competency Builders:

Describe the anatomy, physiology, and pathophysiology of the digestive, genitourinary, and reproductive systems
Identify the historical information, observations, and physical findings significant in the patient with digestive, genitourinary, and reproductive disorders
Describe the assessment and management of digestive, genitourinary, and reproductive system disorders
Identify common prescription drugs that a patient with digestive, genitourinary, and reproductive problems might take and the implications of each
Describe the basic principles, types, and complications of dialysis
Explain the assessment and management of the dialysis patient, including vascular access
Obtain history from a patient with digestive, genitourinary, and reproductive disorders
Identify the pharmacology, actions, indications, precautions, methods, of administrations, dosages, contraindications, and side effects of relevant drugs

Competency: **Manage anaphylaxis emergencies**

Competency Builders:

Describe the anatomy, physiology, pathophysiology, causes, signs and symptoms, assessment, and management of anaphylaxis
Identify the historical information, observations, and physical findings significant in the patient with potential anaphylaxis
Identify the pharmacology, actions, indications, precautions, methods of administration, dosages, contraindications, and side effects for the adult and pediatric patient for epinephrine, diphenhydramine, aminophylline, and dexamethasone
Obtain history from a patient with potential anaphylaxis
Administer epinephrine, diphenhydramine, aminophylline, and dexamethasone to the adult and pediatric patient

Competency: **Manage toxicology, alcoholism, and drug abuse emergencies**

Competency Builders:

Describe toxicologic emergencies
Identify the routes of entry of toxic substances into the body
Describe the role of Poison Control Centers in the EMS system and in the management of patients with toxicological emergencies
Define drug abuse terms
Identify commonly abused drugs and their effects
Describe the anatomy, physiology, pathophysiology, assessment, and management of patients with toxicological emergencies, animal or insect bites, stings, drug overdose, and alcoholism
Describe the incidence of alcoholism, drug abuse, and substance abuse in the United States
Obtain history from a patient with toxicological emergencies, animal or insect bites, stings, drug overdose, and alcoholism
Apply a constricting band
Administer relevant drugs

Competency: **Manage infectious diseases**

Competency Builders:

Define terms and conditions relative to infectious diseases
Describe the anatomy, physiology, pathophysiology, causes, mode of transmission, incubation period, assessment, and management of typical infectious and communicable diseases and parasites
Identify the historical information, observations, and physical findings significant in the patient with infectious/communicable disease or parasites
Practice universal precautions according to CDC standards
Describe procedures for reporting and follow-up after exposure to a communicable disease according to CDC standards
Obtain history from a patient with infectious/communicable disease or parasites

Competency: **Manage environmental injuries**

Competency Builders:

Describe homeostasis, methods of body temperature regulation and methods of thermoregulation and heat dissipation and retention in pathologic circumstances
Identify the historical information, observations, and physical findings significant in the patient with hypothermic or hyperthermic disorders
Describe the anatomy, physiology, pathophysiology, causes, signs and symptoms, assessment, and management of hypothermic or hyperthermic disorders
Identify the historical information, observations, and physical findings significant in the patient with near-drowning emergency
State the factors affecting survivability and probability of successful resuscitation in near-drowning patients
Obtain history from patient with a near-drowning emergencies
Manage a patient with a near-drowning emergencies
Identify common types and sources of ionizing radiation
Identify sources of normal background radiation
Describe the anatomy, physiology, pathophysiology, signs and symptoms, causes, assessment, and management of acute and/or chronic exposure to ionizing radiation
Obtain history from patient with hypothermic or hyperthermic disorders
Manage patient with hypothermic or hyperthermic disorders
Identify the historical information, observations, and physical findings significant in the patient with acute and/or chronic exposure to ionizing radiation
Describe safety procedures for allied health personnel and patients related to exposure to ionizing radiation
Explain procedures for notifying appropriate health officials of radiological incidents
Obtain history from a patient with acute and/or chronic exposure to ionizing radiation
Manage patient with acute and/or chronic exposure to ionizing radiation

Competency: Manage geriatric emergencies

Competency Builders:

Identify the physical, social, and psychological differences between youth and elderly
Identify the historical information, observations, and physical findings significant in the geriatric patient with acute and/or chronic medical problems
Identify illness/complaints that require special consideration in the elderly
Describe the anatomy, physiology, pathophysiology, assessment, and management of common geriatric illnesses
Identify infectious diseases indigenous to specific geographical areas
Obtain a history from a geriatric patient
Treat geriatric patients
Describe geriatric abuse
Describe the components and objectives of a gerontology program
Demonstrate communication techniques with a special needs patient (e.g., blind, deaf, dementia)

Competency: Manage pediatric emergencies

Competency Builders:

Identify the general goals of managing the pediatric patient
Identify the historical information and its sources in evaluating the pediatric patient
Describe, by age groups, the relevant aspects of normal growth and development, personality development, relationship to parents, history factors, common illnesses, and accidents
Describe Sudden Infant Death Syndrome (SIDS), the current theories for causes, assessment, management, and the immediate needs of the family
Describe the characteristics of a child abuser
Describe the characteristics of an abused child
Describe the assessment and management of potentially abused children, including management of the family of the child
Identify types of child abuse
Describe the anatomy, physiology, pathophysiology, assessment, and management of common pediatric disorders
Identify the pediatric dosage for relevant drugs
Demonstrate techniques for airway maintenance in the pediatric patient
Describe techniques and sites for intravenous infusion in the pediatric patient
Obtain a history from a pediatric patient
Assess a pediatric patient

Competency: Manage the gynecologic patient

Competency Builders:

Describe the anatomy and physiology of the female reproductive system
Identify the historical information, observations, and physical findings to be evaluated for the gynecologic patient
Describe the pathophysiology and management of gynecological disorders
Describe potential causes, assessment, and management of trauma to the external genitalia
Describe the assessment and management of a sexual assault victim
Obtain a history from a patient with a gynecologic problem
Assess a patient with a gynecologic problem
Report sexual assault

Competency: **Manage the obstetric patient**

Competency Builders:

Define obstetrical terminology
Describe the process of fetal development and circulation
Identify the historical information, observations, and physical findings to be evaluated for the obstetric patient
Describe early signs and symptoms of pregnancy
Describe potential causes, assessment, and management of trauma to the pregnant mother and the fetus
Describe the effects of pregnancy on pre-existing medical conditions
Describe the anatomy, physiology, pathophysiology, causes, assessment, and management of obstetrics
Describe Braxton-Hicks contractions
Describe the progression of labor
Describe factors that influence transport decisions for the patient in labor
Describe a normal cephalic delivery
Describe the pathophysiology, assessment, and management of delivery complications
Identify the pharmacology, actions, indications, methods of administration, dosages, contraindications, and side effects of oxytocin
Obtain a history for an obstetric patient
Define stages of labor and associated complications
Assess the obstetric patient
Treat obstetrical patients, including assisting with childbirth
Administer oxytocin

Competency: **Manage the neonate**

Competency Builders:

Describe the anatomy, physiology, pathophysiology, assessment, and routine management of the neonate
Describe the mechanisms, effects, and treatment of hypothermia in the neonate
Define the parameters, numerical values utilized, and the procedure for Apgar scoring
Demonstrate stimulation of CPR for the neonate
Identify observations and physical findings to be evaluated in the neonate
Identify problems and equipment requirements for transportation of the neonate
Obtain a history for a neonate
Assess a neonate
Administer oxygen to a neonate
Suction a neonate using DeLee Suction and bulb syringe
Calculate Apgar score
Obtain an antepartum and postpartum history of the mother

Competency: **Manage behavioral emergencies**

Competency Builders:

Define behavioral emergency
Identify factors that may alter the emotional status of the ill or injured
Identify common prescription drugs that a patient with behavioral disorders might take and the implications of each
State reasons for and methods of reassuring patient who is experiencing an emotional crisis
Describe verbal communication techniques useful in managing the emotionally disturbed patient
Describe means to insure the safety of the Paramedic
Describe circumstances when bystanders and relatives should be removed from the scene
Identify factors which increase the risk of suicide and behaviors that are indicators of an impending suicide attempt
Describe techniques that facilitate the systematic gathering and reporting of information about the disturbed patient
Describe techniques that are useful in managing the effects of crisis situations on the Paramedic
Describe techniques that are useful in redirecting anxiety in relatives and bystanders
Identify appropriate action of the Paramedic when confronted with an uncontrollable, armed patient
Describe situations in which the EMT-Paramedic may forcibly restrain or transport a patient
Demonstrate techniques for restraining the violent patient
Demonstrate techniques useful in protecting the EMT-Paramedic when attached by a violent patient
Obtain a history of patients with behavioral emergencies
Assess patients with behavioral emergencies

Competency: Demonstrate paramedic skills

Competency Builders:

Demonstrate patient assessment/management (e.g., medical and trauma)
Demonstrate ventilatory management skills/knowledge (e.g., simple adjuncts, supplemental oxygen delivery, endotracheal intubation, chest decompression, transtrachael jet ventilation/crcothyrotomy)
Demonstrate management of cardiac arrest patient (e.g., therapeutic modalities, megacode, monitor/defibrillator knowledge, pacing)
Demonstrate hemorrhage control
Demonstrate splinting procedures
Demonstrate IV therapy and IO therapy (e.g., set-up, fluid therapy, medication administration)
Demonstrate spinal immobilization (e.g., seated and lying patients)
Demonstrate gynecologic skills and knowledge
Demonstrate other related skills (e.g., radio communications, report writing, documentation)

Competency: Maintain current certifications and continuing education

Competency Builders:

Meet AHA/ARC standards for CPR proficiency
Meet AHA standards for advanced cardiac life-support proficiency
Meet national registry and state requirements for continuing education (e.g., paramedic refresher, additional continuing education)

Dental Hygienist

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	Page
Employability Skills	DHY-3
Professionalism	DHY-8
Teamwork	DHY-12
Computer Literacy	DHY-14
Documentation	DHY-15
Infection Control and Risk Management	DHY-16
Medical Terminology	DHY-23
Anatomy, Physiology, and Pathology	DHY-24
Medical Law and Ethics	DHY-31
Psychology of Stress	DHY-33
Psychology of Human Relations	DHY-35
First Aid and Medical Emergencies	DHY-38
General Administrative Duties	DHY-40
Oral Anatomy and Pathology	DHY-46
Chairside Procedures	DHY-50
Extraoral and Interoral Exams	DHY-56
Preventive Oral Hygiene Procedures	DHY-57
Dental Morphology	DHY-60
Dental Radiography	DHY-61
Preventive Dental Assisting Procedures	DHY-67
Dental Specialties	DHY-69
Dental Hygiene	DHY-74

DON'T FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: **Develop a career plan**

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: Prepare for employment

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: Evaluate the importance of self-esteem as an employability skill

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: Project professional image

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: Achieve individual and professional goals

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: Manage personal finances

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: Manage stressful situations

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: Analyze effects of family on work and work on family

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: Apply lifelong learning skills

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: Manage professional development

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: Use teamwork to solve problems

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: Conduct team meetings

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: **Demonstrate proficiency in technical documentation**

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: **Demonstrate proficiency in technical report writing**

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: Comply with local, state, and federal regulations

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: **Maintain personal safety and hygiene**

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: **Demonstrate general knowledge of basic chemistry**

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: **Demonstrate general knowledge of the human body**

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system.
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: **Demonstrate knowledge of the circulatory/cardiovascular system**

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: **Demonstrate knowledge of the lymphatic system**

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: **Demonstrate knowledge of the urinary system**

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: **Demonstrate knowledge of the reproductive system**

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: **Demonstrate knowledge of the senses**

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: Demonstrate knowledge of immunology

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: Comply with medical law and ethics

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: Exhibit ethical behavior

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: Describe legal ramifications of misconduct

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: **Practice discretion regarding patient information**

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: **Practice personal professional protocol with medical community**

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: **Analyze factors that influence a patient's response to stress**

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: **Analyze physiological response to stress**

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: **Analyze psychological response to stress**

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: **Provide care for a patient with an ineffective coping response**

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: Explain human growth and development

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: Demonstrate appropriate communication techniques

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: **Establish rapport**

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: **Use emergency procedures**

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: **Perform first aid**

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: **Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards**

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: Respond to medical emergencies

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: Maintain medical records and laboratory reports

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: Prepare office communications

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: **Use office equipment**

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: **Demonstrate knowledge of different payment systems**

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: Perform diagnostic coding

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: Process insurance claims/forms

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: Perform financial functions

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Oral Anatomy and Pathology

Competency: Identify dento-osseous structures

Competency Builders:

Identify functions of dento-osseous structures
Identify bones and sutures of the skull
Identify cranial landmarks
Identify TMJ structure and ligaments

Competency: Identify facial muscles

Competency Builders:

Explain formation of facial expression
Explain function of mastication
Identify origin and insertion of suprehyoid muscles
Explain function of tongue and hyoid structure
Identify muscles of tongue

Competency: Explain neurology of head and neck

Competency Builders:

Define reflex arc
Describe function of cranial nerves
Define trigeminal nerve
Differentiate perception of and reaction to various types of pain

Competency: Describe vascular system of the head

Competency Builders:

Identify functions of blood
Identify major arteries and branches (e.g., external carotid, internal and external maxillary)
Identify purpose and location of viscera of head and neck

Competency: Describe developmental abnormalities

Competency Builders:

Differentiate normal and abnormal jaws
Differentiate normal and abnormal lips
Differentiate normal and abnormal mucosa
Differentiate normal and abnormal tongue
Differentiate normal and abnormal salivary glands
Differentiate normal and abnormal teeth (i.e., size, shape, number, structure, eruption)

Competency: Describe dental caries

Competency Builders:

Identify etiology of caries
Describe affects of saliva
Identify types and clinical features of caries
Describe histopathology of the caries process
Explain use of radiographs in caries detection

Competency: Describe pulpal and periapical disease

Competency Builders:

Identify etiology of pulpal disorders
Describe periapical infections and diseases of the supporting bone

Competency: **Describe tissue changes in response to physical or chemical injury in the oral cavity**

Competency Builders:

Describe effects of placement of restorations on the pulp
Describe bruxism
Classify fractures of the teeth
Describe ankylosis
Describe traumatic bone cyst
Compare sialolithiasis and mucous retention
identify consequences associated with wearing removable dental applicances
Describe effects of drugs and heavy metals on structures in oral cavity
identify iatrogenic factors

Competency: **Describe neoplasms of oral cavity**

Competency Builders:

Define benign and malignant
Describe fibroma, papilloma, hemangioman, tori, adenoma, and premalignant lesions (red and white)
Describe squamous cell carcinoma, adenocarcinoma, osteosarcoma, and metastatic neoplasms

Competency: **Describe odontogenic cysts and neoplasms**

Competency Builders:

Define cysts and neoplasms
Describe dental lamina cysts, laterial periodontal, follicular, periapical, calcifying, and keratocyst
Describe ameloblastoma, amelobastic fibroma, and odontoma

Competency: Describe treatment of patients with special needs

Competency Builders:

Describe treatment of gerodontic patients
Describe treatment of edentulous patients
Describe treatment of pediatric patients
Describe treatment of medically compromised patients

Unit: Chairside Procedures

Competency: Perform patient assessment

Competency Builders:

Correlate medical/dental history with a dental hygiene treatment plan and services to be performed
Identify contraindications to dental treatment in a medical and dental history
Recognize remedial actions or referrals
Correlate extraoral and intraoral examination/findings with a dental hygiene treatment plan and patient services to be performed
Conduct a complete periodontal examination, including probing, radiographic interpretation, mobility assessment, and tissue description
Consult with dentists and physicians to verify dental and medical information
Develop treatment plan to be implemented
Record existing restorations, conditions, and pathologies
Assess patient's nutritional status
Perform soft tissue reassessment
Evaluate the effects of initial dental hygiene therapy
Define oral manifestations and their relations to systemic diseases

Competency: Prepare patient

Competency Builders:

Secure patient's chart
Prepare operatory
Greet patient
Review patient's health history
Position patient for examination or treatment
Drape patient
Adjust chair and lights
Position operator and assistant stools

Competency: Maintain dental operatory

Competency Builders:

Follow manufacturer's instructions
Prepare disinfectant solutions
Open operatory
Disinfect operatory and sterilize equipment
Dispose of used materials in compliance with OSHA and EPA
Close operatory

Competency: Provide evacuation and retraction in compliance with OSHA, EPA, and ODPA

Competency Builders:

Practice infection control procedures
Interact with patient
Operate and control high-volume evacuator and low-volume evacuator
Retract tissue
Operate air-water syringe
Perform equipment maintenance and disinfection

Competency: Use dental instruments

Competency Builders:

Identify grasp and exchange types of instruments
Describe the operation zone of grasp and exchange instruments
Identify rotary handpieces and cutting instruments
Describe the operation zone of rotary handpieces and cutting instruments
Demonstrate care and maintenance of dental instruments

Competency: Transfer instruments

Competency Builders:

Follow dentist's direction
Anticipate procedural steps
Use transfer zone
Deliver instruments
Receive instruments
Maintain sequentially organized tray

Competency: Explain instrumentation

Competency Builders:

Identify parts, components, and types of instrumentation
identify sequence of instrumentation

Competency: Use instruments

Competency Builders:

Use grasp
Use fulcrum
Differentiate use of adaption from angulation
Use lateral pressure
Differentiate visibility from accessibility

Competency: Sharpen instruments

Competency Builders:

Use stationary equipment
Use stationary stone
Use supplemental methods
Care for sharpening stone

Competency: Assist with preliminary examination

Competency Builders:

Practice infection control procedures
Prepare basic tray setup
Measure and record vital signs
Record and update patient health history
Interact with patient
Prepare setup for preliminary impression
Take preliminary impression
Record oral condition on patient's chart
Chart patient's teeth
Assist with oral cancer screening

Competency: Assist with administering anesthetic

Competency Builders:

Practice infection control procedures
Read and follow manufacturer's instructions
Prepare anesthetic tray setup
Interact with patient
Apply topical anesthetic
Assist with administration of local anesthetic
Monitor patient's respiration rate and behavior
Rinse patient's mouth
Record treatment on patient's chart

Competency: Assist with application of rubber dam

Competency Builders:

Practice infection control procedures
Prepare tray for rubber dam application and removal
Explain procedure to patient
Assist with installation of rubber dam according to ODPA
Remove rubber dam
Demonstrate application and removal of rubber dam

Competency: **Assist with anterior restoration and aesthetic dental procedures**

Competency Builders:

Interact with patient
Practice infection control procedures
Read and follow manufacturer's instructions
Prepare setup for rubber dam application and removal
Assist during cavity/tooth preparation
Assist with shade and materials selection
Prepare setup for cavity liners and/or acid etch and bonding procedures
Assist with acid etch and bonding procedures
Assist with placement of materials
Assist with finishing and polishing of restoration
Record treatment on patient's chart

Competency: **Assist with in-office bleaching procedures**

Competency Builders:

Interact with patient
Record present shade of teeth
Practice infection control procedures
Assist with product selection
Read and follow manufacturer's instructions
Prepare setup for rubber dam application and removal
Assist with solution application
Monitor bleaching process
Prepare setup and assist with topical fluoride treatment
Instruct patient in postoperative care
Record treatment on patient's chart

Competency: Assist with home-bleaching procedure

Competency Builders:

Interact with patient
Record present shade of teeth
Practice infection control procedure
Assist with product selection
Read and follow manufacturer's instructions
Prepare setup and assist with impression
Pour and trim model
Fabricate and trim tray
Instruct patient in home use according to dentist's orders
Record treatment on patient's chart

Competency: Assist with posterior restoration

Competency Builders:

Interact with patient
Practice infection control procedures
Read and follow manufacturer's instructions
Assist during cavity preparation
Prepare setup for rubber dam application and removal
Prepare setup for cavity liners
Prepare setup for amalgam filling procedure
Prepare setup for composite filling procedure
Prepare for cavity filling
Assist with placement of materials
Assist with carving amalgam
Provide postoperative instructions
Prepare setup for finishing and polishing amalgam restoration
Prepare setup for finishing and polishing composite restoration
Assist with finishing and polishing restoration
Record treatment on patient's chart

Unit: Extraoral and Intraoral Examinations

Competency: Explain examination procedures

Competency Builders:

Identify components of examination
Identify sequence of examination procedures

Competency: Apply techniques of inspection

Competency Builders:

Use materials and instruments
Describe observations during inspection
Use dental charting symbols
Perform oral cancer screening

Competency: Describe periodontium

Competency Builders:

Identify gingiva and related structures
Describe significance of color, size, and contour
Describe surface texture and consistency

Competency: Examine teeth

Competency Builders:

Explain enamel hypoplasia
Differentiate among attrition, erosion, and abrasion
Identify carious lesions
Classify carious lesions
Identify fractures of teeth
Classify occlusion
Differentiate between functional occlusion and trauma from occlusion
Chart periodontal records

Unit: Preventive Oral Hygiene Procedures

Competency: Describe plaque and soft deposits

Competency Builders:

Define plaque and related terminology
Describe the relationship of plaque cycle to dental disease (e.g., dental caries, periodontal infections)
Explain how diet affects plaque and soft deposits

Competency: Describe dental calculus and stains

Competency Builders:

Explain calculus formation
Differentiate supragingival from subgingival calculus
Identify stains of teeth (e.g., exogenous, endogenous intrinsic, exogenous intrinsic)

Competency: Describe scaling and root planing

Competency Builders:

Describe exploratory stroke
Describe coincidental curettage
Describe post treatment procedures

Competency: Remove plaque and stains from teeth

Competency Builders:

Identify disclosing agents
Explain effects and indications of disclosing agents
Apply selective polishing
Use porte polisher
Use abrasive for polishing (e.g., prophyjet)
Clean removable denture

Competency: Remove hard deposits

Competency Builders:

Assess amount and location of deposits
Select instrumentation choice (e.g., ultrasonic, handscalers)
Demonstrate removal of hard deposits
Describe patient reassessment

Competency: Describe oral disease control

Competency Builders:

Describe advantages and disadvantages of toothbrushes
Describe toothbrush procedures (e.g., bass method, rolling stroke, modified stillman, charters)
Describe supplemental brushing methods
Identify contraindications for toothbrushing
Explain care of toothbrushes
Explain interdental plaque control
Identify types and uses of dental floss
Explain oral irrigation
Explain chemical plaque removal
Describe dentifrices
Explain use of mouthrinses
Describe additional supplemental aids (e.g., proxabrush)

Competency: Apply fluorides

Competency Builders:

Explain fluoridation
Identify fluoride in foods
Identify dietary fluoride supplements
Explain purpose and use of topical fluoride
Follow safety precautions for using fluoride
Use sodium fluoride
Use acidulated phosphate-fluoride (APF)
Use stannous fluoride

Competency: Use desensitizing agents

Competency Builders:

Explain action of desensitizing agents
Demonstrate methods of desensitization

Competency: Assist with pit and fissure sealants

Competency Builders:

Interpret and follow manufacturer's instructions for sealants
Prepare setup for pit and fissure sealant
Interact with patient
Prepare sealant preparation
Prepare sealant placement
Record treatment on patient's chart

Unit: Dental Morphology

Competency: Explain dental physiology

Competency Builders:

Describe surfaces and ridges
Identify tooth/oral landmarks
Explain division into thirds
Identify proximal contact areas
Identify interproximal contact areas and spaces
Differentiate between embrasures and escapements
Describe protective contours
Describe cervical curvatures

Competency: Explain arrangement of teeth and occlusion

Competency Builders:

Explain dental arch formation
Describe compensating curves of the dental arches
Describe contact relations of the teeth
Describe occlusal contact and intercuspid relations

Competency: Describe deciduous teeth

Competency Builders:

Differentiate incisors and canines
Identify molars
Explain occlusion

Competency: Describe permanent teeth

Competency Builders:

Describe anterior arrangement (i.e., cental and lateral incisors, canines)
Describe posterior arrangement (i.e., first and second premolars; first, second, and third molars)

Unit: Dental Radiography

Competency: Identify characteristics of radiation

Competency Builders:

Define terms used in radiography
Explain where x-rays are in the electromagnetic spectrum
Identify characteristics of x-radiation (e.g., no mass or charge)
Compare different methods of measuring x-radiation

Competency: Explain how x-rays are produced

Competency Builders:

Identify the different parts of the x-ray tube
Describe the process for production of radiation
Differentiate among the different types of radiation produced
Describe radiographic density—contrast and detail
Explain the Inverse Square Law and its effect on x-ray production

Competency: Describe effects of radiation on the human body

Competency Builders:

Explain somatic and genetic effects of x-rays
Identify tissues most and least sensitive to radiation
Differentiate among exposure variables and their effects, both acute and chronic
Describe methods for reducing patient exposure
Explain methods of operator protection
Identify common methods of personnel monitoring

Competency: **Identify structures through the use of radiographs**

Competency Builders:

Differentiate between radiopaque and radiolucent structures
Differentiate among different tooth structures
Identify the bone and surrounding structures in the oral cavity
Identify the different restorative materials used in the mouth
Identify different abnormalities that may develop in the oral cavity

Competency: **Apply knowledge of the process for developing radiographs**

Competency Builders:

Identify features of a darkroom and necessary equipment
Identify components and chemicals in dental film
Describe how film should be stored
Identify steps for proper film processing
Describe cleanup procedures
List common darkroom errors and methods to prevent them
Identify errors on radiographs
Operate automatic film processors
Duplicate radiographs

Competency: **Maintain unexposed film**

Competency Builders:

Check expiration date
Store film

Competency: Identify anatomic landmarks

Competency Builders:

Locate teeth on radiograph
Locate supporting structures on radiograph
Locate canals on radiograph
Locate foramina on radiograph
Locate sinuses on radiograph
Differentiate normal and abnormal structures

Competency: Describe errors in dental radiographic technique

Competency Builders:

Identify types of possible errors
Explain foreshortening
Explain elongation
Explain cone cutting
Explain improper film placement
Explain distortion
Explain creased film
Explain film fog
Explain overexposed and underexposed film
Explain chemical processing errors
Describe characteristics of diagonostically acceptable quality
Explain how errors can be corrected
Demonstrate error analysis

Competency: Expose films

Competency Builders:

Follow manufacturer's instructions for film and equipment placement
Adjust voltage, amperage, and timer on x-ray equipment
Apply infection control procedures
Perform "bisecting-the-angle" technique
Follow radiation safety precautions for patient and operator
Follow exposure guidelines
Position patient
Select film size and speed
Position film
Perform paralleling technique
Expose extraoral radiographs (e.g., panoramic)

Competency: Process radiographs manually

Competency Builders:

Follow manufacturer's instructions for equipment
Mix solutions for developing and fixing radiographs
Follow darkroom procedures
Handle film properly
Load film in developing tank
Read thermometer
Interpret time and temperature chart
Follow safety precautions to prevent eye injury and minor burns in compliance with OSHA and EPA
Clean and disinfect equipment
Dispose of mixed solutions in accordance with EPA regulations

Competency: **Process radiographs automatically**

Competency Builders:

Follow manufacturer's instructions for x-ray equipment and solutions in compliance with OSHA and EPA
Follow darkroom procedures
Handle film properly
Operate automatic processor

Competency: **Mount radiographs**

Competency Builders:

Handle film properly
Place radiographs in mount
Label mount
Store mounted radiographs

Competency: **Apply bisecting technique to expose a full-mouth survey**

Competency Builders:

Explain basic principles of bisecting technique
Identify common errors in technique
Demonstrate patient positioning
Demonstrate uses of film holders

Competency: **Apply paralleling technique to expose a field-mouth survey**

Competency Builders:

Describe principles and methods of paralleling technique
Describe film placement for all exposures
Prepare instruments for use in oral cavity
Demonstrate use of film holders

Competency: **Complete full-mouth survey on child DXTTR or patient**

Competency Builders:

Select proper number and size films
Select appropriate instrument
Demonstrate proper exposure technique
Demonstrate proper developing technique
Properly evaluate full-mouth survey

Competency: **Complete full-mouth survey on adult DXTTR or patient**

Competency Builders:

Select proper number and size films
Select appropriate instrument
Demonstrate proper exposure technique
Demonstrate proper developing technique
Properly evaluate full-mouth survey

Competency: **Completely full-mouth survey on edentulous patient**

Competency Builders:

Select proper number and size films
Select appropriate instrument
Demonstrate proper exposure technique
Demonstrate proper developing technique
Properly evaluate full-mouth survey

Unit: Preventive Dental Assisting Procedures

Competency: Assist with prophylaxis

Competency Builders:

Prepare prophylaxis and examination tray setup
Prepare saliva ejector or high vacuum evacuator (HVE)
Prepare patient
Interact with patient
Remove debris with saliva ejector or HVE
Assist with scaling
Pass and receive instruments
Air-dry oral cavity
Assist with polishing
Pass and receive dental floss
Use correct techniques to aspirate and retract
Rinse patient's mouth
Instruct patient in home-care procedures
Record treatment on patient's chart

Competency: Administer topical fluoride

Competency Builders:

Set-up for fluoride treatment
Interact with patient
Air-dry oral cavity
Measure liquids and gels
Apply fluoride
Time treatment
Instruct patient in post-fluoride treatment
Record treatment on patient's chart

Competency: Instruct patient about oral hygiene and nutrition

Competency Builders:

Follow manufacturer's instructions on dental products
Prepare tooth brushing and flossing setup
Interact with patient
Demonstrate use of disclosing agents
Demonstrate brushing
Demonstrate flossing
Demonstrate oral hygiene aids
Take plaque index
Examine plaque under microscope
Take a Snyder Test
Incubate Snyder Test
Instruct patient on care of fixed and removal appliances
Instruct patient in recording diet
Analyze dietary report
Instruct patient in proper nutrition
Record treatment on patient's chart

Unit: Dental Specialties

Competency: **Assist with oral surgery**

Competency Builders:

Interact with patient
Practice infection control procedures
Prepare patient for oral surgery
Prepare for oral surgery
Assist with anesthesia
Assist with oral surgery
Prepare setup for implant
Assist with implant
Prepare setup for dry socket treatment
Assist with dry socket treatment
Prepare setup for incision and drainage
Assist with incision and drainage
Prepare setup for surgical irrigation
Prepare setup for biopsy
Assist with biopsy
Prepare biopsy for lab
Give postoperative instructions
Prepare setup for suture removal
Assist with suture removal
Record treatment on patient's chart

Competency: Assist with pediatric dentistry

Competency Builders:

Interact with patient
Prepare pedodontics setup
Practice infection control procedures
Assist with pedodontic examination
Assist with topical fluoride application
Assist with stainless steel crowns
Assist with space maintainers
Prepare pulpectomy setup
Assist with pulpectomy procedures
Assist with pit and fissure sealant placements
Record treatment on patient's chart
Assist with restorative treatment
Assist with patient management (e.g., restraints)

Competency: Assist with endodontics

Competency Builders:

Interact with patient
Practice infection control procedures
Prepare endodontics setup
Assist with rubber dam placement
Assist with endodontic examination
Assist with opening the pulp cavity, removal of diseased pulp, and root canal enlargement
Measure reamers and files
Expose radiographs
Process radiographs
Assist with sterilizing and drying canal
Assist with placement of medicaments
Assist with root canal filling
Assist with endodontic surgery
Record treatment on patient's chart

Competency: Assist with fixed prosthodontics

Competency Builders:

Interact with patient
Practice infection control procedures
Prepare patient
Prepare prosthodontics tray setup
Assist with administering local anesthetic
Take preliminary impression
Remove temporary crowns
Assist with gingival retraction
Assist with final impression for crown and bridge
Assist with crown and bridge try-in and shade selection
Assist with bite registration
Assist with fabrication of temporary restorations
Prepare setup for crown and bridge cementation
Assist with placing temporary restorations
Instruct patient in care and maintenance of temporary restorations
Assist with crown and bridge cementation
Prepare setup for equilibration
Assist with equilibration
Instruct patient in postoperative care
Record treatment on patient's chart

Competency: Assist with periodontics

Competency Builders:

Interact with patient
Practice infection control procedures
Prepare periodontics setup
Assist with periodontic examination
Assist with scaling and sub gingival curettage
Assist with gingivectomy
Set-up for periodontal dressing
Assist with placement of periodontal dressing
Place periodontal dressing
Assist with removal of periodontal dressing
Remove periodontal dressing
Instruct patient in home-care procedures
Record treatment on patient's chart

Competency: Assist with removable prosthodontics

Competency Builders:

Interact with patient
Practice infection control procedures
Prepare patient
Prepare prosthodontics tray setup
Take preliminary impression
Assist with final impression
Assist with removable prosthodontics
Assist with bite registration and tooth selection
Assist with denture/partial try-in
Assist with denture/partial insertion
Assist with denture/partial adjustment
Assist with partial denture repair
Record treatment on patient's chart

Competency: Assist with public health dentistry

Competency Builders:

Demonstrate knowledge of assessment, planning, implementation, and evaluation of community health interventions
Analyze research methodologies for community health interventions
Interpret research findings in scientific literature
Apply research findings to dental hygiene care delivery
Apply statistical analysis to health trends and community interventions
Assist dentist in public health clinics, hospitals, schools and nursing homes
Present information on oral health care to school or community group

Competency: Perform direct patient services

Competency Builders:

Differentiate between deposits and other causes of tooth surface roughness
Check for calculus removal
Scale teeth, removing accretions with hand instruments
Root plane to remove altered cementum
Manipulate mechanical instruments for deposit removal (e.g., ultrasonics, prophy-jet)
Perform soft tissue curettage
Apply desensitizing agents
Clean removable appliances
Direct patient in home therapies to maintain and restore soft tissue health
Provide dietary counseling for health maintenance and specific healing needs
Recommend patient use of caries prevention agents

Unit: Dental Hygiene

Competency: **Explain functions and pathologies of dental-related anatomy**

Competency Builders:

Identify structures and functions of head and neck anatomy including bones, muscles, sinuses, salivary glands, nerves, and vessels
Identify embryonic development of the head, oral cavity, and teeth
Identify teeth and their landmarks
Describe histological components of the head, and oral cavity
Describe elements of the teeth and supporting structures
Describe oral pathological conditions

Competency: **Maintain dental instruments and equipment**

Competency Builders:

Identify various types, functions, and operations of dental operatory and laboratory equipment
Identify types and functions of various dental instruments

Competency: **Assist with dental office emergency care**

Competency Builders:

Describe dental office emergencies, their prevention and treatment
Assist with medical emergency care, including CPR

Competency: Apply anesthesia

Competency Builders:

Identify drug requirements, agencies, and regulations
Record a drug prescription
Identify drug actions, side effects, indications, and contraindications
Identify common drugs used in dentistry
Apply a topical anesthetic agent
Identify properties of anesthetics
Prepare syringes for the administration of local anesthetics
Monitor nitrous oxide-oxygen conscious sedation

Competency: Perform preventive dentistry techniques

Competency Builders:

Identify applicable methods of preventive dentistry and instruct patients on their implementation
Prepare setup for oral prophylaxis and anticariogenic treatments
Identify elements of nutrition, basic food groups, and acceptable diets
Identify deficiencies that manifest symptoms in the oral cavity and describe relevant therapies
Formulate diets to address specific dental needs

Dental Laboratory Technician

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	Page
Employability Skills	DLT-3
Professionalism	DLT-8
Teamwork	DLT-12
Computer Literacy	DLT-14
Documentation	DLT-15
Infection Control and Risk Management	DLT-16
Medical Terminology	DLT-23
Anatomy, Physiology, and Pathology	DLT-24
Medical Law and Ethics	DLT-31
Psychology of Stress	DLT-33
Psychology of Human Relations	DLT-35
First Aid and Medical Emergencies	DLT-38
General Administrative Duties	DLT-40
Oral Anatomy and Pathology	DLT-46
Dental Restoration	DLT-50
Partial Denture Fabrication	DLT-55
Orthodontics	DLT-57
Dental Morphology	DLT-60
Dental Materials I	DLT-61
Dental Materials II	DLT-63
Dental Laboratory Procedures	DLT-66

BEST COPY AVAILABLE

DON'T FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: Develop a career plan

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: **Prepare for employment**

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: **Evaluate the importance of self-esteem as an employability skill**

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: **Exhibit appropriate work ethic**

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: **Apply decision-making techniques**

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: **Project professional image**

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: **Achieve individual and professional goals**

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: **Manage personal finances**

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: **Manage stressful situations**

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: **Analyze effects of family on work and work on family**

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: **Apply lifelong learning skills**

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: Manage professional development

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: **Use teamwork to solve problems**

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: **Conduct team meetings**

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: **Demonstrate proficiency in technical documentation**

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: **Demonstrate proficiency in technical report writing**

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: Comply with local, state, and federal regulations

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: Comply with environmental safety standards, accident prevention methods, and disaster plans

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: Maintain personal safety and hygiene

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: Maintain infection control of work area

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: Apply aseptic and sterilizing principles

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: **Practice quality control**

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: **Conduct proficiency testing**

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: Use common medical symbols, abbreviations, and acronyms

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: Demonstrate knowledge of medical terminology

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: **Demonstrate general knowledge of basic chemistry**

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: **Demonstrate general knowledge of the human body**

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: Demonstrate knowledge of the integumentary system

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: Demonstrate knowledge of the skeletal system

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: **Demonstrate knowledge of the circulatory/cardiovascular system**

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: **Demonstrate knowledge of the lymphatic system**

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: Demonstrate knowledge of the urinary system

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: Demonstrate knowledge of the reproductive system

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: Demonstrate knowledge of the senses

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: **Demonstrate knowledge of immunology**

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: **Comply with medical law and ethics**

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: **Exhibit ethical behavior**

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: **Describe legal ramifications of misconduct**

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: Practice discretion regarding patient information

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: **Practice personal professional protocol with medical community**

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: Analyze factors that influence a patient's response to stress

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: Analyze physiological response to stress

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: **Analyze psychological response to stress**

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: **Provide care for a patient with an ineffective coping response**

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: **Explain human growth and development**

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: **Demonstrate appropriate communication techniques**

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: Establish rapport

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: **Follow established procedures for communication and documentation**

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: **Document patient progress**

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: Use emergency procedures

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: Perform first aid

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: Respond to medical emergencies

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: Maintain medical records and laboratory reports

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: Prepare office communications

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: **Use office equipment**

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: **Demonstrate knowledge of different payment systems**

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: Perform diagnostic coding

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: Process insurance claims/forms

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: Perform financial functions

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Oral Anatomy and Pathology

Competency: Identify dento-osseous structures

Competency Builders:

Identify functions of dento-osseous structures
Identify bones and sutures of the skull
Identify cranial landmarks
Identify TMJ structure and ligaments

Competency: Identify facial muscles

Competency Builders:

Explain formation of facial expression
Explain function of mastication
Identify origin and insertion of suprehyoid muscles
Explain function of tongue and hyoid structure
Identify muscles of tongue

Competency: Explain neurology of head and neck

Competency Builders:

Define reflex arc
Describe function of cranial nerves
Define trigeminal nerve
Differentiate perception of and reaction to various types of pain

Competency: Describe vascular system of the head

Competency Builders:

Identify functions of blood
Identify major arteries and branches (e.g., external carotid, internal and external maxillary)
Identify purpose and location of viscera of head and neck

Competency: Describe developmental abnormalities

Competency Builders:

Differentiate normal and abnormal jaws
Differentiate normal and abnormal lips
Differentiate normal and abnormal mucosa
Differentiate normal and abnormal tongue
Differentiate normal and abnormal salivary glands
Differentiate normal and abnormal teeth (i.e., size, shape, number, structure, eruption)

Competency: Describe dental caries

Competency Builders:

Identify etiology of caries
Describe affects of saliva
Identify types and clinical features of caries
Describe histopathology of the caries process
Explain use of radiographs in caries detection

Competency: Describe pulpal and periapical disease

Competency Builders:

Identify etiology of pulpal disorders
Describe periapical infections and diseases of the supporting bone

Competency: **Describe tissue changes in response to physical or chemical injury in the oral cavity**

Competency Builders:

Describe effects of placement of restorations on the pulp
Describe bruxism
Classify fractures of the teeth
Describe ankylosis
Describe traumatic bone cyst
Compare sialolithiasis and mucous retention
identify consequences associated with wearing removable dental applicances
Describe effects of drugs and heavy metals on structures in oral cavity
identify iatrogenic factors

Competency: **Describe neoplasms of oral cavity**

Competency Builders:

Define benign and malignant
Describe fibroma, papilloma, hemangioman, tori, adenoma, and premalignant lesions (red and white)
Describe squamous cell carcinoma, adenocarcinoma, osteosarcoma, and metastatic neoplasms

Competency: **Describe odontogenic cysts and neoplasms**

Competency Builders:

Define cysts and neoplasms
Describe dental lamina cysts, laterial periodontal, follicular, periapical, calcifying, and keratocyst
Describe ameloblastoma, amelobastic fibroma, and odontoma

Competency: **Describe treatment of patients with special needs**

Competency Builders:

Describe treatment of gerodontic patients
Describe treatment of edentulous patients
Describe treatment of pediatric patients
Describe treatment of medically compromised patients

Unit: Dental Restoration

Competency: Describe tooth arrangement

Competency Builders:

Identify standards for dentogenics
Explain anterior tooth arrangement
Explain posterior tooth arrangement
Identify age, sex, and personality considerations for dynestheics
Identify characteristics of artificial teeth (anterior and posterior)

Competency: Identify edentulous arches

Competency Builders:

Describe the landmarks of the edentulous ridge
Describe the landmarks of the oral cavity

Competency: Describe jaw relationships

Competency Builders:

Explain fully adjustable articulators
Explain semi-adjustable articulators
Explain non-adjustable articulators
Explain face-bow transfer
Explain the mounting of casts
Describe interrelationships of opposing cusps
Describe articulation and occlusal interaction
Describe occlusal morphology
Describe mandibular movement

Competency: Describe impression and cast materials

Competency Builders:

Differentiate between elastic and inelastic impression materials
Identify types of impression materials (e.g., impression compound, gypsum products, zinc oxide eugenol, impression wax, reversible hydrocolloid, irreversible hydrocolloid, rubber base, silicon rubber)
Identify standards used for preliminary impressions
Demonstrate the care and handling of preliminary impressions
Identify standards used for final impressions
Demonstrate the care and handling of final impressions
Explain manipulation and setting time as it relates to thermal conductivity
Explain manipulation and setting time as it relates to dimensional stability

Competency: Use impression trays

Competency Builders:

Differentiate between manufactured impression trays and final impression trays
Fabricate various final custom impression trays

Competency: Use baseplate materials

Competency Builders:

Explain the use of baseplates
Fabricate various types of baseplates

Competency: Use occlusal rims

Competency Builders:

Explain use of occlusal rims
Describe wax contour and dimensions
Pour model for impressions
Fabricate occlusal rims

Competency: **Describe model pouring and die preparation techniques**

Competency Builders:

Explain model pouring for fixed restorations
Differentiate between wet pin and dry pin dowel techniques
Describe model die cutting
Describe marginal ditching techniques
Describe model spacing techniques
Observe model pouring and die preparation techniques

Competency: **Describe restorative waxing techniques**

Competency Builders:

Explain positive waxing
Describe PKT waxing techniques
Differentiate among single, partial, and full coverage restorations
Differentiate among onlays, inlays, 3/4 crowns, and MOD patterns
Identify components of veneer crown designs
Identify components of cantilever bridge design
Identify components of muli-unit restorative designs
Observe single-unit waxing of posterior crowns

Competency: **Describe crown and bridge spruing and investing techniques**

Competency Builders:

Explain stress and wax pattern distortion
Explain burn-out procedures
Explain casting and recovery
Explain spruing techniques
Explain investing techniques
Observe spruing and casting techniques
Observe burn-out, casting, and recovery procedures

Competency: Describe metal adaptation and finishing

Competency Builders:

Explain internal adaptation
Explain marginal fit
Explain occlusal adaptation
Explain finishing and polishing
Observe metal adaptation and finishing

Competency: Explain denture flasking

Competency Builders:

Explain the theory of wax elimination
Describe denture flasking
Describe wax removal
Observe denture recovery

Competency: Explain denture processing

Competency Builders:

Explain denture packing
Explain acrylic preparation
Identify various types of denture acrylics
Differentiate between cross-linking and curing
Observe denture processing

Competency: Explain denture recovery

Competency Builders:

Describe care and handling of denture recovery
Describe ultrasonic cleaning
Observe denture recovery

Competency: Explain selective grinding

Competency Builders:

Describe remounting
Describe processing errors
Describe rules and procedures for selective grinding
Observe selective grinding

Competency: Explain denture finishing and polishing

Competency Builders:

Describe denture base finishing
Describe pumicing
Describe stippling
Describe polishing
Observe denture finishing and polishing

Competency: Describe denture fabrication

Competency Builders:

Differentiate between impressions and models
Describe recorded occlusal rims and scribed landmarks
Describe occlusin, mallocclusion, and articulation
Describe tooth mold and shade selection
Describe anterior and posterior tooth arrangement
Identify dimensions of tissue contour
Observe denture fabrication techniques

Competency: Explain denture repair and maintenance

Competency Builders:

Describe denture base fractures
Describe denture tooth replacement
Differentiate between denture relines and rebases
Observe denture repair and maintenance

Unit: Partial Denture Fabrication

Competency: Describe partial denture design

Competency Builders:

Identify components of a partial denture design
Identify various clasp designs
Identify major and minor connectors
Identify direct and indirect retention
Explain surveying and path of insertion
Explain desirable and undesirable block out
Observe partial denture design

Competency: Describe refractory model duplication

Competency Builders:

Explain duplication of master models
Explain refractory model investment
Describe hydrocolloid duplication
Describe refractory model preparation
Observe duplication of refractory models

Competency: Describe wax pattern adaptation

Competency Builders:

Differentiate among various wax patterns
Explain wax pattern adaptation
Identify various wax pattern components
Observe wax pattern adaptation

Competency: **Describe partial framework spruing and investing techniques**

Competency Builders:

Explain stress and wax pattern distortion
Explain burn-out procedures
Differentiate casting and recovery
Explain spruing techniques
Explain investing techniques
Observe spruing and casting techniques
Observe burn-out, casting, and recovery techniques

Competency: **Describe metal adaptation and finishing**

Competency Builders:

Explain model adaptation
Explain clasp fit to abutment teeth
Explain stone shaping and contouring
Describe electro-polishing techniques
Describe rubber wheeling the framework
Describe polishing procedures
Observe metal adaptation and finishing techniques

Unit: Orthodontics

Competency: **Explain orthodontic treatment as a dental specialty**

Competency Builders:

Identify fixed appliances
Identify removable appliances
Describe functional appliances
Explain passive, active, and guided-appliance formats
Describe preventive, corrective, and interceptive concepts

Competency: **Explain components of orthodontic appliances**

Competency Builders:

Identify clasping, retention and wire systems
Describe autopolymer resin processing
Describe resin finishing/polishing
Explain heat-cured, injected, vacuum-formed, and light-cured resins
Identify banding and soldering techniques
Explain expansion screws, springs, hooks, and other auxiliaries

Competency: **Explain the principles of wire bending**

Competency Builders:

Complete aptitude testing
Identify instruments
Identify wire types, sizes, and uses
Demonstrate wire component formation

Competency: Demonstrate orthodontic appliance repair

Competency Builders:

Apply autopolymerizing repair procedures
Apply torch soldering
Apply electric spot-soldering

Competency: Explain temporomandibular splints

Competency Builders:

Identify maxillary and mandibular splints
Identify flat plane splints
Identify repositioning splints
Describe mouthguards and nightguards
Differentiate between hard and soft materials

Competency: Explain orthodontic records

Competency Builders:

Demonstrate photographic techniques
Demonstrate radiographic techniques
Demonstrate cephalometric techniques
Demonstrate impression techniques
Demonstrate study model fabrication

Competency: Describe miscellaneous functions

Competency Builders:

Explain headgear fabrication
Explain facemask fabrication
Describe indirect bonding techniques

Competency: **Describe orthodontic office procedures**

Competency Builders:

Explain banding techniques, including sizing and cementation
Explain bracket bonding and placement
Demonstrate ligature and elastic placement

Unit: Dental Morphology

Competency: Explain dental physiology

Competency Builders:

Describe surfaces and ridges
Identify tooth/oral landmarks
Explain division into thirds
Identify proximal contact areas
Identify interproximal contact areas and spaces
Differentiate between embrasures and escapements
Describe protective contours
Describe cervical curvatures

Competency: Explain arrangement of teeth and occlusion

Competency Builders:

Explain dental arch formation
Describe compensating curves of the dental arches
Describe contact relations of the teeth
Describe occlusal contact and intercuspid relations

Competency: Describe deciduous teeth

Competency Builders:

Differentiate incisors and canines
Identify molars
Explain occlusion

Competency: Describe permanent teeth

Competency Builders:

Describe anterior arrangement (i.e., cental and lateral incisors, canines)
Describe posterior arrangement (i.e., first and second premolars; first, second, and third molars)

Unit: Dental Materials I

Competency: **Demonstrate knowledge of dental laboratory materials**

Competency Builders:

Identify gypsum materials
Pour models and dies
Describe dental waxes
Indicate uses of dental waxes
Wax-up for metal fabrication
Wax-up for resin processing
Describe impression materials for laboratory use
Explain model duplication media
Identify denture base materials by color and characteristics
Discern similarities and differences of denture base materials
Explain the various metals used in dentistry, the metals used in fixed and removable prostheses
Describe the characteristics and properties of porcelains and ceramic materials
List the various separating agents
List composition of various separating agents
Identify fluxes and antifluxes
Describe the indications and differences of various laboratory alcohols
List the amount of pickling agents
Define wetting agents
Describe the uses of wax solvents
Describe the composition of wax solvents
Identify the variety of abrasives used in finishing appliances
List the polishing agents for resins
List the polishing agents for metals
List the polishing agents for ceramics
List the properties of laboratory gases
List the uses of laboratory gases
List the safe handling of laboratory gases
Describe miscellaneous laboratory materials and agents

Competency: Explain dental laboratory material properties

Competency Builders:

Differentiate force and strain
Define compressive, tensile, and shearing
Differentiate between elastic limit and modulus of elasticity
Differentiate between malleability and ductility
Differentiate between flow and creep
Describe the Knoop hardness test
Describe the Brinell hardness test
Explain linear coefficient of thermal expansion
Differentiate between adhesion and viscosity

Unit: Dental Materials II

Competency: Demonstrate use of impression materials

Competency Builders:

Describe the different impression materials
Identify types of material set
Explain mixing ratios of impression materials
Describe the mixing, working and setting times
Identify factors affecting setting time
Describe proper handling of different impression materials

Competency: Use dental cements, liners, and varnishes

Competency Builders:

Explain the purpose of dental cements, liners, and varnishes
Identify types of dental cements, liners, and varnishes (e.g., zinc phosphate, zinc oxide eugenol, EBA cement, polycarboxylate, glass ionomer)
Differentiate between light cure and self cure liners
Describe the armamentarium for dental cements, liners, and varnishes
Explain material ratios of gypsum products
Describe the mixing and setting time
Identify factors effecting setting time

Competency: Use restorative materials

Competency Builders:

Explain the purpose of using restorative materials
Identify components of restorative materials use
Describe the armamentarioum for restorative materials use
Explain material ratios of mercury and alloys
Explain the purpose of using ketac silver
Describe the armamentarium for ketac silver use
Demonstrate the application of ketac silver
Explain the purpose of using composites
Identify types of composites
Describe the advantages and disadvantages of composite use
Describe the aramentarium for composite use
Explain material ratios of composite
Describe the mixing and setting time
Describe application methods for composites
Explain acid etching
Identify factors affecting setting time
Identify factors affecting mixing time
Define polymerization
Define monomers
Define polymer
Define curing
Define catalyst
Explain the properties of shade selection and its armamentarium
Explain the bonding types and procedure
Explain the different bonding products

Competency: Demonstrate dental laboratory procedures

Competency Builders:

Pour models and dies
Explain the purpose of using gypsum products
Identify types of gypsum products
Describe the armamentarium for gypsum product use
Explain material ratios of gypsum products
Describe the mixing and setting time
Define exothermic reaction, calcining, gauging water, and refractory
Explain model trimming
Identify factors affecting setting time
Fabricate impression trays
Assemble materials and equipment
Adapt spacer
Adapt acrylic
Trim finished tray
Fabricate gypsum models
Select gypsum material
Rinse and dry impressions
Apply mathematical ratios
Pour edentulors models
Trim models
Articulate models

Unit: Dental Laboratory Procedures

Competency: Describe dental material factors

Competency Builders:

Describe the implication of biting forces
Describe the implication of temperature changes
Describe the implication of esthetic forces
Describe the implication of acidity
Describe the implication of microleakage
Describe the implication of galvanic shock
Describe the implication of retention

Competency: Construct occlusion rims

Competency Builders:

Adapt baseplate
Apply wax
Trim and smooth wax

Competency: Assist with fabrication of temporary crowns

Competency Builders:

Construct and trim temporary crowns
Adapt and prepare preformed crowns

Competency: **Prepare laboratory case for shipping**

Competency Builders:

Complete laboratory authorization
Write legibly
Disinfect all materials prior to shipping
Protect wet alginates from distortion
Package case for shipment
Apply postage
Ship case

Health Information Technician

NOTE: Each TCP should respond to labor market demands in your area. Therefore, the following pages should be examined before being selected for use in TCP Part I (See "The TCP Process" Tab). For example, some units may not apply to your situation, nor might all the competencies within each unit be appropriate. Also, note that several units appear within each of the twelve occupations in this binder. Those "common" units should only appear once in the draft competency list for TCP Part I if you are compiling several occupations in a cluster format (See "TCP Matrix" Tab).

Units to Consider:	Page
Employability Skills	HIT-3
Professionalism	HIT-8
Teamwork	HIT-12
Computer Literacy	HIT-14
Documentation	HIT-15
Infection Control and Risk Management	HIT-16
Medical Terminology	HIT-23
Anatomy, Physiology, and Pathology	HIT-24
Medical Law and Ethics	HIT-31
Psychology of Stress	HIT-33
Psychology of Human Relations	HIT-35
First Aid and Medical Emergencies	HIT-38
General Administrative Duties	HIT-40
Basic Pharmacology	HIT-46
Health Information Processing	HIT-48
Health Information Maintenance	HIT-50
Health Information Clerical Functions	HIT-53
Health Information Quality Control	HIT-56
Health Information Report Preparation	HIT-61
Health Information Supervision	HIT-62

DON'T FORGET TO INSERT YOUR ACADEMIC COMPETENCIES HERE

Communications Literacy, Mathematics Literacy, Science Literacy, and Technology Literacy have been removed so that you may insert your own academic lists here.

COMMUNICATIONS LITERACY

(e.g., Reading, Writing, Speaking, and Listening)

MATHEMATICS LITERACY

(e.g., Algebra, Geometry, Trigonometry, Calculus)

SCIENCE LITERACY

(e.g., Physical Science, Environmental Science, Agriscience, Biology, Chemistry, Physics, Anatomy & Physiology)

TECHNOLOGY LITERACY

(i.e., the impact of technology on humans and their home, work, and play environments)

Unit: Employability Skills

Competency: **Develop a career plan**

Competency Builders:

Identify current interests and aptitudes
Identify common barriers to employment
Describe strategies to overcome employment barriers
Locate resources for finding employment
Research job trends
Identify career options
Identify advantages and disadvantages of career options (in addition to other than monetary)
Identify job requirements
Investigate education/training opportunities
Evaluate personal strengths and weaknesses

Competency: Prepare for employment

Competency Builders:

Identify traditional and non-traditional employment sources
Identify present and future employment opportunities (by geographic location)
Research job opportunities, including non-traditional careers
Compare salary ranges and benefit packages
Compile occupational profile
Identify rights and responsibilities of equal employment opportunity laws
Design resume and cover letter
Target resume
Secure references
Investigate generic and specific employment tests (e.g., civil service exam; drug screening)
Use follow-up techniques to enhance employment potential
Demonstrate legible written communication skills using correct grammar, spelling, punctuation, and concise wording
Describe methods for handling illegal questions on job application forms and during interviews
Write letter of application
Research prospective employer and services performed
Explain critical importance of personal appearance, hygiene, and demeanor
Interpret job description
Demonstrate appropriate interview question and answer techniques
Demonstrate methods for handling difficult interview questions
Evaluate job offers
Write letter of acceptance
Write letter of declination
Demonstrate good listening skills
Ask for the job tactfully
Participate in extracurricular activities (e.g., student government, community projects,)

Competency: Evaluate the importance of self-esteem as an employability skill

Competency Builders:

Identify factors that affect self-esteem
Compare effects of low self-esteem and high self-esteem
Identify strategies to promote positive self-esteem

Competency: Demonstrate job retention skills

Competency Builders:

Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
Exhibit appropriate work habits and attitude
Demonstrate ability to set priorities
Identify behaviors to establish successful working relationships
Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age
Identify opportunities for advancement
List reasons for termination
List consequences of being absent frequently from job
List consequences of frequently arriving late for work
Demonstrate interpersonal relations skills (i.e., verbal and written)
Demonstrate negotiation skills
Demonstrate teamwork
Follow chain-of-command
Exhibit appropriate job dedication

Competency: Demonstrate knowledge of work ethic

Competency Builders:

Define work ethic
Identify factors that influence work ethic
Differentiate law and ethics
Describe how personal values are reflected in work ethic
Describe how interactions in the workplace affect personal work ethic
Describe how life changes affect personal work ethic

Competency: Exhibit appropriate work ethic

Competency Builders:

Use time-management techniques
Avoid personal activity during work hours
Attend work as scheduled
Adhere to company and/or governmental policies, procedures, rules, and regulations
Exercise confidentiality
Demonstrate appropriate human relations skills
Adhere to rules of conduct
Accept constructive criticism
Offer constructive criticism
Take pride in work
Resolve conflict
Manage stress
Avoid sexual connotations and harassment
Adjust to changes in the workplace
Demonstrate punctuality
Assume responsibility for personal decisions and actions
Take responsibility for assignments
Follow chain-of-command

Competency: Apply decision-making techniques

Competency Builders:

Identify decision to be made
Identify ownership of decision to be made
Identify possible alternatives and their consequences
Make decisions based on facts, legality, ethics, goals, and/or culture
Apply time factor(s)
Present decision to be implemented
Evaluate decision made
Take responsibility for decision

Competency: Apply problem-solving techniques

Competency Builders:

Identify problem
Select appropriate problem solving tools/techniques
Identify root problem cause(s)
Track root problem cause(s)
Identify possible solutions and their consequences (e.g., long term, short term, crisis)
Use resources to explore possible solutions to problem
Contrast advantages and disadvantages of each solution
Identify appropriate action
Evaluate results
Identify post-preventive action

Competency: Exhibit characteristics for job advancement

Competency Builders:

Display positive attitude
Demonstrate knowledge of position
Perform quality work
Adapt to changing situations and technology
Demonstrate capability/responsibility for different positions
Identify characteristics of effective leaders
Identify opportunities for leadership in work place/community
Demonstrate initiative to affect change in workplace
Participate in continuing education/training program
Responds appropriately to criticism from employer, supervisor, or other employees
Exhibit awareness of corporate culture
Prepare for job setbacks
Exhibit continual growth based on performance evaluation
Set realistic goals

Unit: Professionalism

Competency: Project professional image

Competency Builders:

Define professionalism
Exhibit professional appearance
Exhibit professional manners
Project professional attitude
Identify individuals' vital role in organization
Exhibit proper etiquette in professionally-related situations

Competency: Achieve individual and professional goals

Competency Builders:

Set flexible, realistic, and measurable goals
Identify potential barriers to achieving goals
Identify strategies for addressing barriers to goal achievement
Breakdown long-term goals into short-term goals
Prioritize goals
Commit to goals
Adjust goals
Obtain support for goals
Reward goal achievement

Competency: Manage personal finances

Competency Builders:

Explain need for personal management records
Balance checkbook
Identify tax obligations
Analyze how credit affects financial security
Compare types and methods of investments
Compare types and methods of borrowing
Compare types and methods of insurance
Compare types of retirement options/plans
Identify discriminatory vs. non-discriminatory expenditures

Competency: Support community well-being

Competency Builders:

Identify environmental, educational, and social issues
Participate in social and/or community activities

Competency: Achieve organizational goals

Competency Builders:

Evaluate personal goals in relation to organizational goals
Monitor progress by evaluating feedback
List responsibilities in relation to organization goals
Accomplish assigned tasks
Exercise responsibility in relation to organizational goals
Set appropriate personal performance standards
Communicate goals with supervisor and peers
Demonstrate knowledge of products and services
Promote organizational image and mission

Competency: Demonstrate positive relations in the workplace

Competency Builders:

Identify personality types of self and other
Identify various management styles
Support employer expectations
Support employer decisions
Accept constructive criticism
Give constructive feedback
Adapt to changes in workplace
List factors to consider before resigning
Write letter of resignation

Competency: Manage stressful situations

Competency Builders:

Accept stress as part of daily life
Identify personal and professional factors contributing to stress
Describe physical and emotional responses to stress
Evaluate positive and negative effects of stress on productivity
Identify strategies for reducing stress
Implement strategies to manage stress
Create strategies for developing and maintaining support systems

Competency: Analyze effects of family on work and work on family

Competency Builders:

Identify how family values, goals, and priorities are reflected in work place
Identify responsibilities and rewards associated with paid and non-paid work
Identify responsibilities and rewards associated with families
Explain how family responsibilities can conflict with work
Explain how work can conflict with family responsibilities
Explain how work-related stress can affect families
Explain how family-related stress can affect work
Identify family support systems and resources
Identify work-related support systems and resources
Communicate with family regarding work

Competency: Apply lifelong learning skills

Competency Builders:

Define lifelong learning
Identify factors that cause need for lifelong learning
Analyze effects of change
Identify reasons why goals change
Describe importance of flexibility and adaptability
Evaluate need for continuing education/training

Competency: Manage professional development

Competency Builders:

Identify career opportunities
Modify career plan
Participate in continuing education/training opportunities
Document continuing education/training
Read profession-related manuals, technical journals, and periodicals
Attend meetings, workshops, seminars, conferences, and demonstrations
Participate in professional organizations
Build personal/professional mentor relationship
Build personal/professional support system
Build professional network
Strengthen communication skills
Strengthen leadership skills
Strengthen management skills

Unit: Teamwork

Competency: Demonstrate knowledge of teamwork

Competency Builders:

Define empowerment
Differentiate work groups and teams
Identify conditions essential to teamwork (e.g., brainstorming)
Explain influence of culture (e.g., corporate, community) on teamwork
Identify appropriate situations for using teams
Define team structures (e.g., cross functional, quality improvement, task force, quality circles)
Identify team building concepts
Describe characteristics and dynamics of teams
Identify characteristics of effective team leaders and members
Identify responsibilities of a valuable team member
Identify methods of involving each member of a team
Explain how individuals from various backgrounds contribute to work-related situations (e.g., technical training, cultural heritage)
Explain the purpose of facilitators
Define consensus
Define reward/recognition system

Competency: Demonstrate teamwork

Competency Builders:

Identify purpose of team and intended goal (include time frames)
Structure team around purpose
Define responsibilities of team members
Contribute to efficiency and success of team
Work toward individual and team milestones
Analyze results of team project
Facilitate a team meeting
Assist team member(s) with problem
Monitor time frame
Stress continuous improvement
Accept failure as part of learning

Competency: Use teamwork to solve problems

Competency Builders:

Identify appropriate situations for using teams
Use problem-solving process in a team setting
Identify quality management processes/techniques
Identify quality assurance processes/techniques
Prepare presentation

Competency: Conduct team meetings

Competency Builders:

Plan agenda
Schedule meeting and location
Invite appropriate personnel
Solicit outside speakers as needed
Assign someone to take minutes
Facilitate introductions
Invite questions and comments and group participation
Focus team on agenda items
Assign appropriate action, time frame and accountability to tasks
Monitor time
Close meeting on time
Publish minutes in timely manner
Set ground rules
Avoid placing individual agendas above the group's agenda

Unit: Computer Literacy

Competency: Describe personal computer operations

Competency Builders:

Explain how data is stored in main computer memory
Explain how computer system executes program instruction
Explain computer storage capacity
Explain how data is represented
Describe data storage techniques
Identify types of memory

Competency: Operate computer hardware

Competency Builders:

Practice proper media handling techniques
Identify hardware and its use
Use hardware (e.g., mouse, modems, touch screen, printers, digitizers, scanners)
Keyboard efficiently
Demonstrate basic care of hardware
Explain need for and application of security levels/procedures

Competency: Use software

Competency Builders:

Define software types and functions
Perform functions necessary to operate software
List advantages and disadvantages of integrated and dedicated software
Operate system software
Demonstrate basic use of spreadsheets
Demonstrate word processing skills
Demonstrate basic use of databases
Demonstrate system commands
Apply security levels/procedures while handling sensitive data

Unit: Documentation

Competency: Demonstrate proficiency in technical documentation

Competency Builders:

Record data
Maintain test logs
Compile cumulative reference notebook/record

Competency: Demonstrate proficiency in technical report writing

Competency Builders:

Write out procedures
Design charts and graphs
Outline reports
Write reports
Present resports
Complete equipment failure reports
Compose technical letters and memoranda
Write formal reports
Demonstrate ability to use cross reference/technical manuals

Unit: Infection Control and Risk Management

Competency: Comply with local, state, and federal regulations

Competency Builders:

Explain state and federal governmental roles in universal precautions as outlined by the Centers for Disease control (CDC)
Comply with Occupational Safety and Health Administration (OSHA) regulations
Explain purpose of Material Safety Data Sheets (MSDS)
Comply with Environmental Protection Agency (EPA) regulations
Report communicable diseases to local health authorities
Use precautions to prevent contamination
Demonstrate use of fire and safety equipment
Correct safety hazards
Write incident reports for accidents or safety infractions

Competency: **Comply with environmental safety standards, accident prevention methods, and disaster plans**

Competency Builders:

Observe environmental safety rules of facility
Identify potential hazardous situations
Explain universal precautions to transmission of infectious diseases (e.g., HIV/AIDS, hepatitis)
Identify fire prevention methods, fire control, fire alarm systems, and fire reporting procedures
Demonstrate use of fire extinguisher
Identify facility disaster plan
Demonstrate safety precautions for using equipment
Demonstrate safety precautions for using liquids and poisonous substances
Conduct safety inspection of client area
Correct safety hazards (e.g., spills)
Complete incident reports for accidents or safety infractions
Identify legal implications of accidents in health care facility
Explain potential sources of hazards, (e.g., fire, electrical, chemical, biological, radioactive)
Follow procedures for hazardous situations (e.g., eye and face wash, shower, fire extinguishers)
Store materials properly
Label materials properly
Follow manufacturer's instructions for safe operation of all equipment and instruments

Competency: **Maintain personal safety and hygiene**

Competency Builders:

Use universal precautions
Demonstrate isolation techniques
Wash hands aseptically
Use eye/faceshield protection
Wear gloves
Wear mask
Wear uniform or professional attire
Apply principles of aseptic techniques and sterility
Practice proper hygiene
Immunize self against communicable diseases
Complete incident reports as required
Demonstrate proper body mechanics
Demonstrate safe and effective sterilizing methods for instruments and equipment
Demonstrate safe and effective use of safety equipment
Identify at-risk behaviors which promote the spread of HIV/AIDS and/or hepatitis
Differentiate fact from fallacy regarding the transmission of HIV/AIDS and hepatitis
Identify principles of ergonomics
Identify common causes of back injuries
Demonstrate proper body mechanics involved in lifting, moving, transferring, ambulating, and positioning patient

Competency: **Maintain infection control of work area**

Competency Builders:

Identify modes of transmission of infection
Identify methods for preventing infection transmission
Differentiate between bacteriostatic and bacterialcidal
Identify disinfection techniques
Define "nosocomial infection"
Identify terms related to cleaning and disinfecting
Outline measures to be taken to clean and disinfect
Outline flow of dirty equipment and materials
Contain used linens
Isolate contaminated linens
Clean work areas
Disinfect work areas

Competency: **Apply aseptic and sterilizing principles**

Competency Builders:

Read and follow manufacturer's instructions for safe operation of all equipment and instruments
Maintain infection control
Prescrub instruments
Disinfect instruments
Sterilize instruments
Operate sterilizing equipment
Store sterilized equipment and supplies
Maintain quality-control log
Define asepsis
Identify methods for sterilizing and disinfecting reusable equipment
Define spore strip and how it is used to guarantee sterilization
Explain why dating of sterilized equipment is necessary
Explain why proper documentation of disinfection and sterilization procedures is necessary

Competency: **Dispose of waste materials in compliance with government regulations**

Competency Builders:

Practice safe, sanitary, and sterile procedures
Dispose of noninfectious waste
Dispose of infectious waste
Dispose of hazardous waste
Dispose of controlled substances
Dispose of needles and sharp instruments properly

Competency: **Demonstrate isolation techniques**

Competency Builders:

Describe different types of isolation
Demonstrate mask, gown, and gloving techniques
Demonstrate use of protective eyewear/faceshield
Demonstrate double bagging technique
Demonstrate procedures for disposal of soiled materials
Provide care for patient using isolation technique
Collect specimen from isolation patient
Disinfect isolation unit

Competency: Maintain patient safety

Competency Builders:

Apply restraints (e.g., soft, vest)
Monitor use of restraints
Utilize gait belt
Assist patient to walk with assistive ambulation devices
Demonstrate safe usage of patient transport equipment
Demonstrate safe handling of patient medical equipment (e.g., IV's, catheters, oxygen tubing)
Identify proper bed height
Position patient maintaining proper body alignment, supporting body parts
Demonstrate patient transfer techniques
Identify safety needs of medicated patient
Demonstrate usage of side rails
Identify placement of patient call device
Orient patient to surroundings

Competency: Explain sexually transmitted diseases (STDs)

Competency Builders:

Differentiate fact from fallacy regarding the transmission and treatment of STDs
Identify community resources and services available to victims of STDs
Identify at-risk behaviors which promote the spread of AIDS
Describe infection control techniques designed to prevent the spread of STDs

Competency: Practice quality control

Competency Builders:

Identify quality control parameters
Maintain quality control parameters
Prepare quality control charts and graphs
Calculate means, standard deviations, and coefficients of variation
Identify trends, shifts, and "out of control" situations
Address "out of control" situations
Identify bias in control systems
Maintain quality control procedure manual (including laboratory policies; laboratory organization and personnel definition; procedure for collection, labeling, andtransportation of specimens; work sheets; log books, and reporting of results; instructions for processing specimens; laboratory saftey related to biological, chemical, mechanical, and electrical hazards and the disposal of contaminated materials; monitoring quality control of equipoment, media, reagents, and stains)

Competency: Conduct proficiency testing

Competency Builders:

Explain rules and regulations regarding proficiency testing (i.e, acceptable parameters for constituents, laboratory areas address by proficiency testing, and rules of inspecting agencies and Medicare-approved systems)
Explain the construction of blind and double-blind studies
Compare peer results
List sources of proficiency testing materials
Process proficiency testing materials

Unit: Medical Terminology

Competency: **Use common medical symbols, abbreviations, and acronyms**

Competency Builders:

Identify commonly used symbols (e.g., O_2)
Write out full names of commonly used acronyms (e.g., IV, PACU, IPPB, CPAP)
Write out full names of commonly used abbreviations (e.g., bx= biopsy)
Spell medical terms correctly
Demonstrate use of Roman numeral system

Competency: **Demonstrate knowledge of medical terminology**

Competency Builders:

Define, spell, and pronounce basic Greek and Latin prefixes and suffixes
Spell basic Greek and Latin prefixes and suffixes
Pronounce basic Greek and Latin prefixes and suffixes
Identify principal terms relating to the body as a whole (e.g., ambulation, hypothermia)
Define terms related to the integumentary system
Define terms related to the skeletal system
Define terms related to the muscular system
Define terms related to the nervous system
Define terms related to the circulatory/cardiovascular system
Define terms related to the lymphatic system
Define terms related to the respiratory system
Define terms related to the digestive system
Define terms related to the endocrine system
Define terms related to the urinary system
Define terms related to the reproductive system
Define terms related to the senses
Define terms related to immunology
Define terms related to pathology

Unit: Anatomy, Physiology, and Pathology

Competency: Demonstrate general knowledge of basic chemistry

Competency Builders:

Identify elements on periodic table
Design simple chemical formulas
Contrast atoms verses molecules
Define synthesis, decomposition, and exchange reactions
Define diffusion, filtration, and osmosis
Differentiate between acids and bases

Competency: Demonstrate general knowledge of the human body

Competency Builders:

Define anatomy and physiology and explain their relationship
Describe the anatomical position
Identify body directions, planes, and cavities
Name the major organ systems and their functions
Classify major organs by the organ system they are within
Define cell composition, shape and size
Identify cell regions and organelles and explain their function
Identify basic life processes of cell division and transportation
Identify the four major tissue types, their function and subtypes
Define neoplasm and distinguish between benign and malignant
Describe effect of aging across the lifespan

Competency: **Demonstrate knowledge of the integumentary system**

Competency Builders:

List the functions of the integumentary system
Describe skin's response to touch/pressure, temperature, and pain
Name the layers of the skin
Identify structures associated with the skin, hair, hair follicle, sebaceous gland, and sudoriferous gland
Name the major body membranes
Identify common skin disorders
Describe common types of skin lesions

Competency: **Demonstrate knowledge of the skeletal system**

Competency Builders:

List functions of the skeletal system
Name methods of classifying bone
Identify bone types within each classification method
Explain the structure and function of a long bone
Describe the composition of bone
Define function and dysfunction of bone marrow
Explain the process of bone formation and growth
Identify major bones of the human skeleton
Name types of bone markings and their associated terms
Define joint and describe the typical structure of a joint
Name categories of joints
Compare the amount of movement allowed by each type of joint
Define types of motion
Identify various types of fractures
Identify the various methods of correction for fractures
Identify common disorders and injuries of bones and joints

Competency: Demonstrate knowledge of the muscular system

Competency Builders:

Identify types of muscle tissue
Describe muscle contraction
Define the parts of a muscle and explain major muscle types
Define muscle tone, isotonic and isometric contractions
Name types of movements produced by skeletal muscle contractions
Identify the major muscles of the human body
Identify common abnormal conditions of the muscles
Identify origin, insertion and function of muscles
Describe common disorders and injuries of the muscles

Competency: Demonstrate knowledge of the nervous system

Competency Builders:

Describe the general functions of the nervous system
Identify the main parts of the nervous system
Name principle cell types that compose the nervous system
Describe the neuron, its function, and the existing types of neurons
Describe the neuralgia, its function, and the existing types of neuralgia
Define ganglia, nuclei, tracts and nerves, noting their differences
Describe the events of the nerve impulse
Identify parts of the brain
Describe structures and functions of the various parts of the brain and spinal cord
Explain function of the autonomic nervous system and its divisions
Describe common disorders and injuries of the nervous system

Competency: **Demonstrate knowledge of the circulatory/cardiovascular system**

Competency Builders:

Identify the structures and functions of the heart
Trace the pathway of blood through the heart
Describe routes of blood circulation
Define blood pressure, pulse, systole, diastole and cardiac cycle
Describe the pathway of impulses through the heart's conduction system
List factors that influence heart rate
Identify the structure and function of the blood vessels - arteries, veins and capillaries
Identify major blood vessels
Identify structures involved in fetal circulation
Identify several pulse points
Identify major components of blood
Identify the blood types
Describe the blood clotting process
Describe common disorders of the circulatory/cardiovascular system

Competency: **Demonstrate knowledge of the lymphatic system**

Competency Builders:

Name the structures composing the lymphatic system
Identify the functions of the lymphatic system
Explain the relationship between the lymphatic system and the cardiovascular system
Explain the immune response in relationship to the lymphocytes
Define antigens
Define antibodies and ways in which antibodies act against antigens
Differentiate between active and passive immunity
Describe common disorders of the lymphatic system

Competency: Demonstrate knowledge of the respiratory system

Competency Builders:

Identify major respiratory system organs and structures describing the function of each
Describe the function of major respiratory system organs and structures
Define cellular respiration, external respiration, internal respiration, ventilation, expiration and inspiration
Describe the process of gas exchange in the lungs and the tissues
Explain role of the respiratory muscles in breathing
Identify brain areas involved in the control of respiration
Explain respiratory volumes and capacities
Describe a common disorders and injuries of the respiratory system

Competency: Demonstrate knowledge of the digestive system

Competency Builders:

Identify the structures and functions of the digestive system
Describe the mechanisms of mastication, swallowing, vomiting and defecation
Define anabolism and catabolism
Define basal metabolic rate and total metabolic rate
Describe common disorders of the digestive system

Competency: Demonstrate knowledge of the endocrine system

Competency Builders:

Differentiate between endocrine and exocrine glands
Identify major endocrine glands and hormones produced by each
Explain response of body systems to hormones
Describe common endocrine gland disorders

Competency: **Demonstrate knowledge of the urinary system**

Competency Builders:

Identify components of the urinary system
Explain the functioning of the urinary system
Identify nitrogenous waste found in the urine
Explain how water and electrolyte balance is maintained by the body
Define micturition
Explain how micturition occurs
Describe common disorders of the urinary system

Competency: **Demonstrate knowledge of the reproductive system**

Competency Builders:

Explain the general function of the reproductive system
Identify major organs of the reproductive system
Describe the phases of the menstrual cycle
Explain the process of meiosis, spermatogenesis, and oogenesis
Identify stages of embryonic development
Explain the physiology of childbirth
Describe common disorders of the reproductive system

Competency: **Demonstrate knowledge of the senses**

Competency Builders:

Identify major structures and functions of vision, hearing, balance, smell, taste, and touch
Define refraction, accommodation, real image, and emmetropic
Describe common disorders and injuries of the senses

Competency: **Demonstrate knowledge of immunology**

Competency Builders:

Explain the immune response in relationship to the lymphocytes
Define antigens and antibodies
Explain the differences among the five major classes of antibodies
Describe the relationship between antigens and antibodies
Differentiate between active and passive immunity
Describe common immunodeficiencies, allergies, and autoimmune disorders

Unit: Medical Law and Ethics

Competency: Comply with medical law and ethics

Competency Builders:

Differentiate between legal and ethical behavior
Explain terms, principles, and characteristics of legal and ethical behavior
Explain state and federal rules and regulations governing the practice of the profession
Explain legal ramifications of breaching rules and regulations
Explain effects of unethical and/or unlawful behavior of health care professionals
Practice within the role and scope of the profession as defined by law, job description, and facility/arena of practice

Competency: Exhibit ethical behavior

Competency Builders:

Describe ethical dilemma in health care (e.g., death and dying, medical ethics committees)
Explain health care professional's responsibility in situations of patient abuse and neglect
Explain health care professional's responsibility in situations of coworker chemical addition
Identify personal, societal, and global implications of substance use and abuse
Explain effects of unethical behavior of health care professionals

Competency: Describe legal ramifications of misconduct

Competency Builders:

Explain terms, principles, and characteristics of legal and ethical behavior
Explain legal and ethical ramifications of breaching patient confidentiality

Competency: Practice discretion regarding patient information

Competency Builders:

Identify components of Patient Bill of Rights
Communicate patient's rights
Identify patient's rights and responsibilities
Describe reasons for sharing patient information
Identify appropriate persons to whom information can be released
Describe methods of maintaining confidentiality
Explain truth-in-ending law
Explain anatomical gift act
Explain advance directives
Explain living will
Explain informed consent
Identify reasons for termination of patient services
Explain consequences of noncompliance with physician's recommendations
Explain remuneration
Describe impact of communicable diseases
Describe the importance of proper sample identification

Competency: Practice personal professional protocol with medical community

Competency Builders:

Explain process of certification/licensure of health professionals
Comply with tax requirements
Maintain integrity of personal files
Explain the statute of limitation
Identify ownership of medical records
Maintain procedures for legal access to patient and/or records
Investigate professional liability coverage options

Unit: Psychology of Stress

Competency: **Analyze factors that influence a patient's response to stress**

Competency Builders:

Explain stress as a concept
Differentiate between stress and stressors
Explain how an individual's perception of stress influences his response to stressors
Explain how internal and external mitigating factors influence one's response to stress
Identify coping mechanisms used to decrease stress
Identify biological adaptive responses to stress

Competency: **Analyze physiological response to stress**

Competency Builders:

Describe the stress response on the autonomic nervous system, endocrine system, cardiovascular system, renal system, respiratory system, and hemopoietic system
Explain how the internal and external non-specific mitigating factors relate to the physiological stress response
Differentiate between immune systems response to stressors in children and adults
Explain how the concept of stress relates to activation of the disease process

Competency: Analyze psychological response to stress

Competency Builders:

Identify psychological stressors
Describe the relationship between personality types and the stress response
Summarize the primary and secondary appraisal of a stressor
Differentiate between cognitive and behavioral coping mechanisms
Differentiate among problem-focused, emotion-focused, and appraisal-focused coping in relation to stressors
Identify a patient's ability to cope with stress based on individual and stressor characteristics
Identify types of coping strategies
Identify selected defense mechanisms
Summarize ineffective coping behaviors
Explain the psychobiologic response of anxiety as it relates to stress
Describe the disequilibrium associated with response to stressors

Competency: Provide care for a patient with an ineffective coping response

Competency Builders:

Assess psychological responses to stress in a patient
Promote exploration of feelings when providing nursing care
Describe strategies to assist in stress reduction
Implement strategies to assist in stress reduction
Evaluate selected nursing interventions and suggest alternative measures

Unit: Psychology of Human Relations

Competency: Explain human growth and development

Competency Builders:

Describe characteristics of growth and development from conception to birth
Describe characteristics of growth and development from birth through preschool
Describe characteristics of growth and development from school age through adolescence
Describe characteristics of growth and development of the adult through the life span

Competency: Demonstrate appropriate communication techniques

Competency Builders:

Identify components of provider-client relationship
Identify ways to cope with stress
Identify uniqueness of individual (e.g., cultural, generational, social, ethnic)
Treat clients with respect and dignity
Identify assertive and aggressive responses
Differentiate between acceptable and unacceptable touching
Identify barriers to communication

Competency: Establish rapport

Competency Builders:

Describe proper manner for greeting a patient
Adapt communication to individual's ability to understand (e.g., functioning level, emotional state, and educational level)
Respond to verbal and nonverbal communication
Serve as liaison between physician, patient, and others
Solicit patient's understanding of communication
Translate medical terms into language patient can understand
Interpret patient's reaction to illness and disability
Describe individual, cultural and socioeconomic differences in people
Identify methods in which to communicate with patients or responsible party with sensory disorders
Support patient/responsible party during the grief process
Orient patient to policies, facilities, and staff
Respond to patient/responsible party in a therapeutic manner
Identify patient personality types
Treat patient with empathy and impartiality
Support patient's right to make decisions regarding care
Encourage ventilation of patient/responsible party's feelings

Competency: Follow established procedures for communication and documentation

Competency Builders:

Transmit reports of patient status
Demonstrate basic computer skills
Complete interdepartmental requisitions (e.g., therapies, procedures, tests)
Complete an incident report
Monitor accuracy in all communications
Initiate medical records according to institutional policies
Maintain medical records according to institutional policies
Identify need for documenting and reporting
Interpret patient-related documents participate in team conferences
Report change in patient status
Clarify physicians orders
Differentiate charting methods
Respond to request for service
Respond to request from patient's funding source
Notify patient or responsible party of changes required in treatment plan
Write instructions for use of patient equipment (e.g., orthosis, prosthesis)
Write instructions for a home therapy program
Witness a consent form
Create an informational display

Competency: Document patient progress

Competency Builders:

Record current treatment rendered and patient response
Include parameters in notes (e.g., subjective, objective, assessment, plan)
Use correct grammar, spelling, and approved abbreviations
Secure appropriate signatures
Write legibly
Use appropriate resources

Unit: First Aid and Medical Emergencies

Competency: Use emergency procedures

Competency Builders:

Identify emergency procedures
Contact local emergency assistance
Demonstrate first responder procedures
Acquire first aid certification
Acquire CPR certification

Competency: Perform first aid

Competency Builders:

Assist with first aid for wounds or fractures
Administer first aid to control bleeding
Administer first aid for shock
Administer first aid for burn patient
Assist with first aid for poisoned patient
Assist with choking patient
Assist with patient having seizure
Assist with syncopal patient

Competency: Maintain cardiopulmonary resuscitation (CPR) according to accrediting agency standards

Competency Builders:

Update CPR certification
Administer CPR to infants and children
Administer CPR to adults
Administer care for obstructed airways for infants, children, and adults

Competency: Respond to medical emergencies

Competency Builders:

Identify patient
Perform head to toe patient assessment
Assess patient needs
Describe signs and symptoms of emergency situations
Identify basic emergency equipment
Take appropriate action

Unit: General Administrative Duties

Competency: Perform scheduling and recordkeeping duties

Competency Builders:

Schedule patient appointments
Coordinate activities with other departments
Coordinate activities with community agencies
Schedule space and equipment for therapy
Maintain daily charges for equipment/treatment
Comply with reimbursement requirements
Maintain patient files/charts
Maintain patient attendance records
Schedule reoutine equipment maintenance and repair

Competency: Perform other departmental duties

Competency Builders:

Assist in dealing with vendors
Assist in maintenance of departmental budget
Assist in writing/revising job description
Assist in writing/revising forms (e.g., home programs, documentation forms)
Maintain departmental cleanliness
Maintain inventory/supplies

Competency: Manage reception area

Competency Builders:

Prepare reception area
Greet visitors and patients
Advise patient of office hours
Manage children accompanying patient
Identify ways to communicate with patients with sensory disorders
Screen non-patient visitors
Explain delays to patients physician's fees

Competency: Demonstrate telephone handling techniques

Competency Builders:

Place calls
Record telephone messages (e.g., date, time, initial calls)
Screen calls
Transfer calls
Obtain information for return calls
Handle emergency calls
Make arrangements for patient's admission to hospital
Make patient referrals
Phone prescriptions to pharmacy

Competency: Maintain appointment schedules

Competency Builders:

Write appointments legibly
Prepare appointment calendar
Record appointments
Prepare appointment cards
Maintain recall system
Confirm appointments
Schedule outpatient diagnostic tests
Make referral appointments for patients

Competency: Maintain medical records and laboratory reports

Competency Builders:

Obtain patient information
Prepare folder
Prepare charge documentation
Explain importance of records management
File information alphabetically or numerically according to office protocol
Retrieve patient record from file
Prepare cross-reference file
Process incoming medical reports
Purge records
Prepare reports concerning patient care, condition, census, accidents, and incidents
Maintain current documentation of patient status and care
Complete immunization records
Compile patient laboratory reports
Process completed laboratory reports
Document results from reference laboratories
Verify tests ordered and test received

Competency: Prepare office communications

Competency Builders:

Compose business correspondence
Edit business correspondence
Transcribe letters from dictating machine
Keyboard business correspondence
Print documents
Proofread for errors in correspondence
Complete appropriate consent forms
Address envelopes
Process incoming mail
Maintain files for correspondence
Classify outgoing mail
Label outgoing mail

Competency: Use office equipment

Competency Builders:

Operate calculator
Operate checkwriter
Operate computer
Operate copy machine
Operate fax machine
Operate multi-line telephone system

Competency: Demonstrate knowledge of different payment systems

Competency Builders:

Identify required procedures for private carriers
Identify required procedures for non-insured patients
Identify required procedures for health maintenance organization (HMO)
Identify required procedures for preferred provider organization (PPO)
Identify required procedures for independent practitioner association (IPA)
Identify required procedures for U.S. government employees (CHAMPUS)
Identify required procedures for Aid to Dependent Children (ADC)
Identify required procedures for general assistance (GA)
Identify required procedures for Medicare
Identify required procedures for Medicaid
Identify required procedures for worker's compensation

Competency: Perform diagnostic coding

Competency Builders:

Stay current with diagnostic coding changes
Complete forms for international classification of diseases (ICD-9 CM)
Complete forms for current procedural terminology (CPT)
Complete forms for health care procedural code (HCPC)
Complete forms for diagnostic related groups (DRG)
Complete forms for J-codes

Competency: Process insurance claims/forms

Competency Builders:

Define primary and secondary carriers
Define third party administrators
Explain payment and rejection procedures (e.g., co-pays, deductibles, errors)
Process quick-claim forms
Use procedure codes
Log and track insurance claims/forms

Competency: **Perform financial functions**

Competency Builders:

Apply basic bookkeeping fundamentals
Interpret and explain fees
Arrange financial agreements
Complete ledger
Prepare account summaries
Collect fees
Issue receipts
Maintain petty cash account
Prepare bank deposits
Verify invoices
Collect delinquent bills
Collect and post payments
Process credit card transactions
Prepare checks for signature
Prepare payroll
Reconcile bank statements, cash, and/or receipts
Complete Worker's Compensation forms and Medicare/Medicaid forms
Prepare schedule of accounts receivable
Prepare schedule of accounts payable
Maintain accounts receivable
Maintain accounts payable

Unit: Basic Pharmacology

Competency: Maintain supply of medications

Competency Builders:

Check inventory stock
Contact supplier
Rotate stock
Process narcotic forms (i.e., Drug Enforcement Agency (DEA) license)
Store medications properly
Prepare expired medications for disposal
Dispose of medications properly (i.e., comply with government regulations)

Competency: Calculate dosage according to physician's orders

Competency Builders:

Verify accuracy of medical orders
Use Physician's Desk Reference (PDR)
Transcribe medication order
Calculate oral dosage
Calculate parenteral dosage
Calculate sublingual dosage
Calculate pediatric dosage
Calculate intravenous dosage and rate of flow

Competency: Instruct patients on use of medications

Competency Builders:

Provide verbal and/or written instructions for medication use
Explain use of medications (e.g., identify side effects, adverse effects, interactions)
Maintain standing orders according to physician's protocol (e.g., prescription refills)

Competency: Dispense medications according to medical orders

Competency Builders:

Identify patient
Verify patient allergies
Use reference materials
Verify accuracy of medical orders
Calculate dosages
Prepare oral medication
Identify correct anatomical sites
Prepare intramuscular, intradermal, and subcutaneous injectable medications
Prepare and administer sublingual medications
Prepare transdermal medications
Prepare inhalant medications
Prepare instillation medications
Prepare and administer topical medications
Prepare and administer rectal medications
Prepare and administer vaginal medications
Assist with administration of local anesthesia
Administer medications
Document medication administration
Document patient response to medications

Competency: Evaluate response to medication

Competency Builders:

Identify possible adverse reactions to medication
Assess patient reaction to medication
Report untoward reactions to appropriate sources
Document patient response to medication

Unit: Health Information Processing

Competency: **Assemble medical records**

Competency Builders:

Activate a patient's health record
Receive registration information
Update or add information
Assign number to patient or verify number already issued
Activate previous records and sign out to appropriate individual or unit
Assure security of master patient index
Prepare birth certificate according to state guidelines
Prepare fetal death certificate according to state guidelines

Competency: **Perform quantitative analysis on patient's health record**

Competency Builders:

Collect health records of discharged or deceased patient
Enter date of discharge or death in appropriate place
Arrange reports in correct order (e.g., laboratory reports placed in record sequence and chronological order)
Review record for correct patient identification on all pages
Review record for presence of all necessary reports

Competency: **Maintain health record locator system**

Competency Builders:

Complete requisition information
Perform record search through locator system
Retrieve and sign out record
Print computer record
Copy microfilm record
Update health record locator system
Forward record to appropriate location

Competency: Abstract information from a health record

Competency Builders:

Use computerized abstracting system
Perform abstract according to Uniform Hospital Discharge Data Set (UHDDS) guidelines
Verify information on abstract with health record
Document on health record that abstract has been completed
Forward abstracted information to appropriate area

Competency: Transcribes recorded dictation

Competency Builders:

Verify treatment of patient
Follow regulatory procedures for handling release of information of drug/alcohol records
Follow procedure for handing release of information of adoption records

Competency: Prepare health record for court of deposition

Competency Builders:

Verify authenticity of court order
Verify authenticity of subpoena
Verify treatment of patient
Analyze record for completeness
Notify appropriate person if the case may involve the facility, an employee of the facility, or a member of the medical staff
Remove correspondence or other reports not part of the health record
Number pages in record
Photocopy record
Obtain notarization for certification statement as needed
Notify appropriate persons as to the date of appearance
Record date of appearance in subpoena log
File legal document in a secure setting outside of original health record
Retain legal document on file in accordance with department policies/procedures

Unit: Health Information Maintenance

Competency: Trace lost record

Competency Builders:

Receive request for record
Examine sign-out log
Use computer locator system
Check area where record is supposed to be located
Search other departmental areas (e.g., transcription area, correspondence area, coding/abstracting area, microfilm area)
Forward found record to requester
Note in patient index that record, if not found, is temporarily unavailable
Recompile medical records from available ancillary departments, physicians offices, and/or any other resources

Competency: Maintain a tumor registry

Competency Builders:

Obtain health record of tumor patient
Record information into accession registry
Identify severity indicators
Initiate patient information into tumor registry master patient index
Update patient information into tumor registry master patient index
Complete tumor registry abstract form from Department of Health
Record information of a deceased patient into registry
Follow guidelines set forth by American College of Surgeons

Competency: **Code diagnoses and procedures using the current modification of the International Classification of Diseases (ICD-9-CM)**

Competency Builders:

Review entire record for diagnosis to be coded (physician progress notes, operational reports, labs, medical sheets, pathology reports, etc. for optimal reimbursement)
Select diagnosis according to specific guidelines (e.g., HCFA)
Use coding manual/encoder
Identify diagnosis code number(s)
Select procedures according to specific guidelines (e.g., HCFA)
Check code numbers for accuracy
Check code number for sequencing
Define concurrent coding
Contact physician for further clarification when needed

Competency: **Assign Major Diagnostic Classification (MDC) and Diagnostic Related Groups (DRGs)**

Competency Builders:

Receive ICD-9-CM coded record
Verify proper sequencing of diagnoses
Verify proper sequencing of procedures
Notify physician regarding questions of possible sequencing changes
Verify proper code numbers for diagnoses
Verify proper code numbers for procedures
Assign severity of illness categories
Validate DRG assignment
Validate output on UB 92 or other billing forms
Use computerized grouper to assign DRG's
Assign appropriate Major Diagnostic Classification
Assign appropriate Diagnostic Related Group within the MDC
Define DRGs

Competency: **Code diagnoses and procedures using Current Procedural Terminology (CPT-4) methodology**

Competency Builders:

Review outpatient record for diagnoses to be coded
Review outpatient record for procedures to be coded
Select the most appropriate diagnostic test(s) or procedure(s) which correlates to the CPT-4 coding guidelines
Contact physician for further clarification if record documentation doesn't permit exact coding
Perform concurrent coding
Check CPT-4 coding number for accuracy
Check CPT-4 coding number for sequencing
Define ASC (Ambulatory Surgery Center) payment groups
Define APGs (Ambulatory Patient Groups)
Define RBRVS (Reimbursement Based Relative Value System)

Competency: **Maintain computer files**

Competency Builders:

Store repetitive material
Create backup files
Store documents on disks
Revise spreadsheet formulas
Define optical disc storage
Define CPR (Computerized Patient Record)

Unit: Health Information Clerical Functions

Competency: Compose electronic correspondence

Competency Builders:

Identify need to compose correspondence
Use specified format
Compose draft of correspondence
Revise draft of correspondence
Edit for grammar, spelling, punctuation, and sentence structure
Prepare final copy of correspondence
Proofread final copy
Submit correspondence to appropriate person

Competency: Transcribe recorded dictation

Competency Builders:

Receive dictated material
Select materials to be transcribed in order of priority
Listen to recorded dictation
Transcribe materials in specified format according to departmental policies and procedures
Edit transcribed materials for accuracy and completeness
Record required transcription data on form (e.g., reference initials, date dictated, date transcribed)
Record completion of dictated material in control log
Forward completed dictated material to appropriate area

Competency: **Input data on computer**

Competency Builders:

Input data into spreadsheet format
Input data into graphs and charts
Input data into source documents
Input data into database files
Input data with optical character recognition equipment
Input data with voice activated equipment
Input data using peripheral equipment available (e.g., mouse, touch screen, graphics tablet, light pen, digital scanner, camera)

Competency: **Distribute information**

Competency Builders:

Receive data via modem
Transmit data via electronic billboard or e-mail
Monitor electronic bulletin board or e-mail
Transmit data via modem
Transmit data via facsimile machines
Transmit data via local area networks

Competency: **Maintain filing system**

Competency Builders:

Define filing system(s)
Maintain manual filing system(s)
Maintain cross-referencing filing system
Maintain filing system for magnetic media
Maintain filing system for storing backup copies of disks
Maintain filing system for securing classified or confidential materials

Competency: Prepare health record for microfilming

Competency Builders:

Verify all forms in record for correct name and hospital number
Remove and destroy forms not preserved by the hospital
Check for proper sequence of record
Place target sheet as top page of record to be microfilmed
Placed prepared record in appropriate area

Competency: Maintain office equipment and supplies

Competency Builders:

Perform basic office equipment maintenance
Monitor hardware and software for working condition
Assist in determining needs for software
Maintain office supplies
Update materials as mandated

Unit: Health Information Quality Control

Competency: **Perform qualitative analysis on patient's health record**

Competency Builders:

Review record for appropriate signatures and authentication for all entries
Review record for necessary dictation (e.g., discharge summary, history and physical exam, operative report)
Review record for completeness of information (e.g., inappropriate use of abbreviations)
Review record for accuracy of information
Record all omissions
Reroute incomplete records to responsible practitioners
Reanalyze record after appropriate individuals have had the opportunity to correct identified omissions

Competency: **Prepare report for physician's incomplete records**

Competency Builders:

Review physician's incomplete record file
Identify record(s) not completed within the specified time period according to medical staff by-laws, JCAHO standards, and/or applicable department of health regulations
Retrieve health records to verify delinquency
Determine if physician has received notification of incomplete record(s)
Prepare report of delinquent incomplete record(s)
Forward report to appropriate individual(s) or department(s)
Submit report to hospital administration

Competency: Evaluate procedure for release of patient information

Competency Builders:

Review procedure for release of patient information
Determine time period to be covered by evaluation
Retrieve records listed in correspondence log for specified time period
Review patient(s) authorization for release of information for appropriate signature and date
Identify any invalid patient authorization
Submit findings to appropriate individual(s)

Competency: Evaluate procedure for health record analysis

Competency Builders:

Review procedure for health record analysis
Determine time period to be covered by evaluation
Retrieve record(s) to be reviewed
Review record(s)
Identify any record with omissions
Submit findings to appropriate individual(s)
Implement new and/or revised policies/procedures subsequent to the review and analysis of the quality control study findings

Competency: Evaluate procedures for abstracting and coding

Competency Builders:

Review procedures for abstracting and coding
Determine time period to be covered by evaluation
Retrieve records to be reviewed
Reabstract record and check with original information for differences
Make necessary corrections
Recode record and check original codes for differences
Make necessary corrections
Generate change notices, where applicable, for the business/finance office if corrections have an impact on payer reimbursement to the facility
Submit findings to appropriate individual(s)
Implement new and/or revised policies/procedures subsequent to the review and analysis of the quality control study findings

Competency: Evaluate procedure for transcribing medical records

Competency Builders:

Review procedures for transcribing medical records
Determine time period to be covered by evaluation
Retrieve records to be reviewed for specified time period
Screen each report for grammar and spelling
Identify any reports with omissions or errors
Submit findings to appropriate individual(s)
Implement new and/or revised policies/procedures subsequent to the review and analysis of the quality control study findings

Competency: Perform quality review

Competency Builders:

Select and/or procure topic for quality review
Select and/or procure criteria and standards for quality review
Determine time period to be included in review
Determine number of record(s) to be selected for review
Retrieve and sign out records to be reviewed
Review each record for compliance with criteria and standards
Record findings of review
Forward report to appropriate individual(s) or committee(s)
Implement new and/or revised procedures/policies subsequent to the review and analysis of the quality review findings

Competency: Conduct utilization review process

Competency Builders:

Determine which health record(s) are to be reviewed on a daily basis
Determine the standards and/or criteria to be used per each review to be conducted
Retrieve record(s) for review
Document findings of the review
Submit reports to appropriate authority to determine the need for continued hospitalization
Re-establish a time frame for when the next utilization review will take place if continued hospitalization is authorized
Contact director for handling of termination notice(s) if continuation of hospital stay is denied
Retain data abstracted for each review per department policies and procedures

Competency: Prepare materials for accreditation

Competency Builders:

Receive notice of accreditation review
Review standards and criteria for accreditation
Complete accreditation review survey form
Obtain all materials required by the accreditation review team
Correct deficiencies prior to schedule date of accreditation review visit
Notify staff of accreditation review visit

Competency: **Validate data for patient-related information system needs**

Competency Builders:

Verify data was obtained from valid sources
Verify timelines of data sources
Verify completeness of data sources
Verify accuracy of data sources
Verify appropriateness of data sources
Compare data with standards (e.g., length of stay norms, Medicare mortality rate, department productivity standards)
Check data for internal consistency
Perform edit check to monitor data accuracy
Compare data with other data sources/references to determine consistency

Competency: **Analyze data for patient-related information system needs**

Competency Builders:

Prepare data for analysis (e.g., compile data, develop graphs, tables)
Perform departmental case-mix analysis
Analyze data in relation to regulatory and accreditation standards
Analyze case-mix payment rates (e.g., DRG) to determine reimbursement optimization
Analyze employee performance data (i.e., quality of patient care) in relation to departmental/institutional performance standards

Unit: Health Information Report Preparation

Competency: **Prepare census reports**

Competency Builders:

Prepare daily inpatient census report
Prepare admissions statistical report
Prepare discharge statistical report
Prepare length of stay statistical report
Prepare monthly statistical report
Analyze statistical reports
Define various statistical terms (e.g., ALOS, LOS, death rates)

Competency: **Gather data to support patient-related information system needs**

Competency Builders:

Conduct surveys of patients, users of data, health care providers, administrator and/or researchers
Conduct interviews with users of data, health care providers, administrators, researchers and/or others
Tabulate requests for patient related data
Abstract information from patient records for research studies
Abstract information from patient records for reimbursement
Compare claims submitted to third party payers with reimbursement received
Abstract information from patient records for disease, procedures, physician, or other indices
Abstract information from patient records for compilation of registries
Abstract information from patient records for compilation of vital statistics
Abstract information from patient related records to develop user (e.g., physician profiles)
Abstract information from patient records for quality assurance studies
Abstract information from patient records for utilization, review
Abstract information from patient records for risk management

Unit: Health Information Supervision

Competency: **Design departmental services and operational systems**

Competency Builders:

Develop departmental goals and objectives
Develop departmental plans
Develop departmental policies
Revise departmental policies
Develop departmental procedures
Revise departmental procedures
Develop job descriptions
Revise job descriptions
Develop transition plans for implementation of new or revised systems
Develop goals and objectives for computerized information systems
Develop inservice education programs for departmental staff
Design forms for collection of patient related data (e.g., medical record forms, quality assurance, utilization review forms)

Competency: **Identify resources to support departmental operations**

Competency Builders:

Determine personnel needs
Determine equipment needs
Determine supply needs
Determine space requirement needs

Competency: **Execute plan(s) for implementing departmental services**

Competency Builders:

Select personnel
Orient personnel
Inform organization staff of plan(s)
Implement new/revised policies and procedures
Monitor adherence to system specifications
Implement new/revised policies and procedures
Monitor adherence to system specifications
Implement new/revised information, and/or service and/or operational systems
Monitor adherence to budget (e.g., determine budget variance)
Coordinate on site review activities (e.g., PRO reviews)
Monitor changes in federal, state and local laws, regulations, and joint commission standards
Monitor policy/procedure compliance
Counsel employees
Terminate employees
Design employee staffing schedules
Maintain equipment (i.e., schedule preventive maintenance, arranged for repairs)
Coordinate educational programs for departmental and/or non departmental staff
Conduct meetings
Participate in departmental and/or institutional committees
Confer with providers and users of departmental services

Competency: **Evaluate effectiveness of departmental services**

Competency Builders:

Determine variation(s) from established objectives and/or standards of performance
Report progress toward achieving long and short range goals
Monitor accreditation survey results (e.g., JCAHO, Medicare)
Recommend improvement(s) in systems
Evaluate employee performance
Monitor departmental productivity
Monitor work flow

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